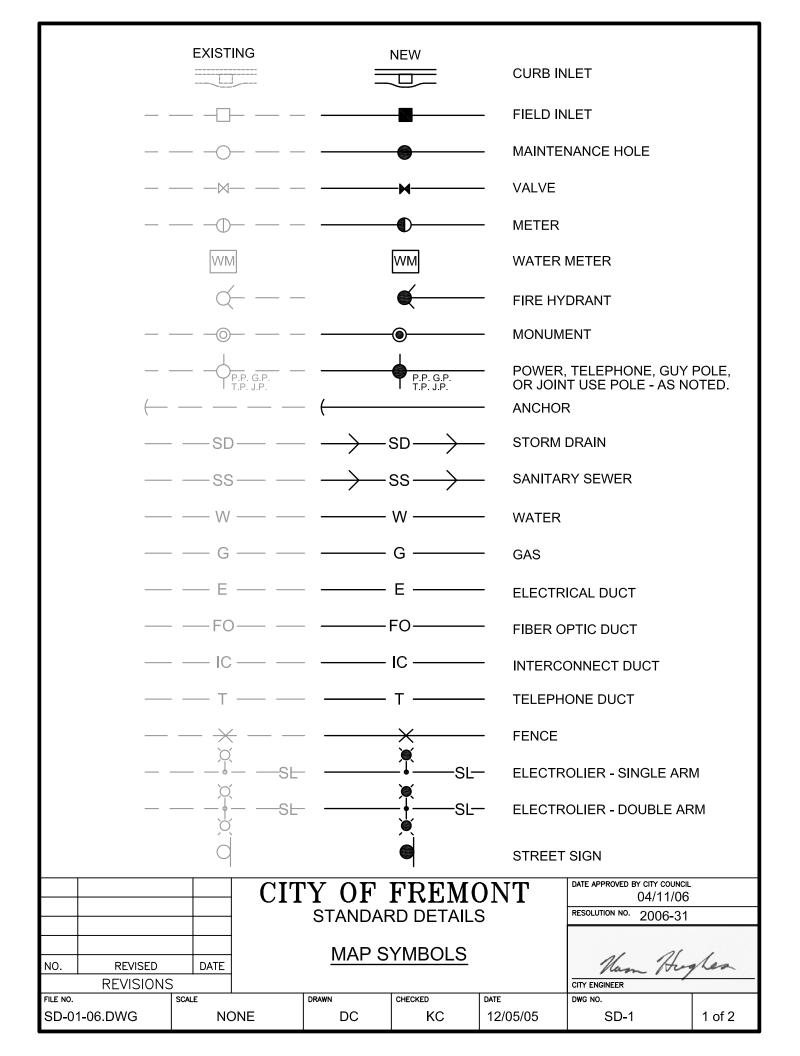


FOR IMPROVEMENTS
WITHIN PUBLIC RIGHT OF WAY

APPROVED BY CITY COUNCIL RESOLUTION NO. 2006-31 APRIL 9, 1985 MARCH 1994 (AMENDED) APRIL 11, 2006 (AMENDED) CITY OF FREMONT 39550 LIBERTY STREET FREMONT, CALIFORNIA 94538 (510) 494-4700

STANDARD DETAILS - INDEX TITLE	DWG NO.
MAP SYMBOLS ·····	SD-1
STREET GEOMETRICS	
TYPE "A" CURB, GUTTER, AND SIDEWALK ······	
TYPE "B" CURB, GUTTER, AND SIDEWALK ······	
TYPE "C" CURB, GUTTER, AND SIDEWALK ·······	
TYPE "D" CURB, GUTTER, AND SIDEWALK	
MISCELLANEOUS CURB AND GUTTER DETAILS	SD-7
SCORE MARKS TYPICAL SPACING	SD-8
CURB, GUTTER AND SIDEWALK REPAIR METHODS	SD-9
TYPE "A" DRIVEWAY APPROACH - RESIDENTIAL ······	SD-10A
TYPE "A" DRIVEWAY APPROACH - RESIDENTIAL RETROFIT ONLY	SD-10B
TYPE "B" DRIVEWAY APPROACH - COMMERCIAL/INDUSTRIAL	SD-11
TYPE "D" DRIVEWAY APPROACH CASE 1 - RESIDENTIAL ····································	SD-12A
TYPE "D" DRIVEWAY APPROACH CASE 2 - RESIDENTIAL	SD-12B
TYPE "E" DRIVEWAY APPROACH - 10' RIGHT-OF-WAY ······	SD-13A
TYPE "E" DRIVEWAY APPROACH - 13' RIGHT-OF-WAY ······	SD-13B
CONCRETE MONUMENT	SD-14
CONCRETE MONUMENT FOR PRIVATE STREETS	SD-15
CONCRETE BUS PAD	SD-16
TYPE "A" STREET BARRICADE	SD-17
TYPE "A" FENCE WITH GATE	SD-18
TYPE "B" FENCE ·····	SD-19
TYPE "B" FENCE GATES ·····	SD-20
STORM DRAIN AND SEWER MAINTENANCE HOLE	SD-21
STORM DRAIN AND FIELD INLET	SD-22
STREET NAME SIGN, TRAFFIC SIGN AND POST DETAILS	SD-23
ELECTROLIER DETAIL ·····	SD-24
CITEA ELECTROLIER · · · · · · · · · · · · · · · · · · ·	SD-25
UTILITY TRENCH ·····	SD-26
TIE-IN PAVEMENT·	SD-27
LONGITUDINAL TRENCH TRANSVERSE TRENCH ······	SD-28
COLD PLANE ·····	SD-29
TRENCH BACKFILL AND COMPACTION REQUIREMENTS	SD-30
ROCKWHEEL TRENCH ·····	SD-31
BACKFILL AND AC REPLACEMENT FOR UTILITY POTHOLES/WINDOWS	SD-32
THRU CURB DRAIN - COMMERCIAL/INDUSTRIAL	SD-33
FIRE HYDRANT	SD-34
COMBINED FOOT TRAIL AND BICYCLE PATH	SD-35
FOOT AND EQUESTRIAN TRAIL	SD-36

STANDARD DETAILS	
LANDSCAPE DETAILS	<u>DWG NO.</u>
TREE PLANTING AND STAKING	LSD-1
TREE PLANTING WITH TREE GRATE ····································	LSD-2
SHRUB AND GROUNDCOVER PLANTING	LSD-3
SHRUB AND GROUNDCOVER PLANTING LAYOUT I	LSD-4
STREET TREE CLEARANCE	LSD-5
TREE CLEARANCES I	LSD-6
MEDIAN PAVING COBBLE	LSD-7
MAINTENANCE BAND········	LSD-8
TREE PROTECTION FENCING	LSD-9
TEMPORARY TRUNK WRAP PROTECTION I	LSD-10
VEGETATED AND GRASSY BIOSWALE WITH TREES	LSD-11
TREE AND SHRUB PLANTING AT SLOPE	LSD-12
TREE PLANTING GUIDE LIST	LSD-13
IRRIGATION MATERIALS	LSD-14
IRRIGATION CONTROLLER CABINET WITH CALSENSE CONTROLLER	LSD-15
IRRIGATION BACKFLOW PREVENTOR UNIT	LSD-16
IRRIGATION BACKFLOW PREVENTOR UNIT ENCLOSURE	LSD-17
IRRIGATION TRENCH······	LSD-18
IRRIGATION QUICK COUPLING VALVE IN BOX	LSD-19
IRRIGATION WIRE SPLICE	LSD-20
IRRIGATION ROTOR OR POP-UP SPRAY	LSD-21
IRRIGATION GATE VALVE	LSD-22
IRRIGATION REMOTE CONTROL VALVE WITH GATE VALVE [	LSD-23
IRRIGATION MASTER VALVE AND FLOW SENSOR · · · · · · · · · · · · · · · · · · ·	LSD-24
IRRIGATION PRESSURE REDUCTION VALVE	LSD-25
IRRIGATION WYE STRAINER	LSD-26
BIOSWALE WITH SUBDRAIN	LSD-27
TRAFFIC DETAILS	
STREET NAME SIGN - MAST ARM MOUNTED · · · · · · · · · · · · · · · · · · ·	TSD-1
STREET NAME SIGN - POLE MOUNTED ····································	
COMMUNICATIONS PULL BOX (FIBER OPTIC SPLICE CLOSURE)	
COMMUNICATIONS PULL BOX (NO. 6)	
SPEED LUMP	
CCTV DOME CAMERA MOUNTING ····································	



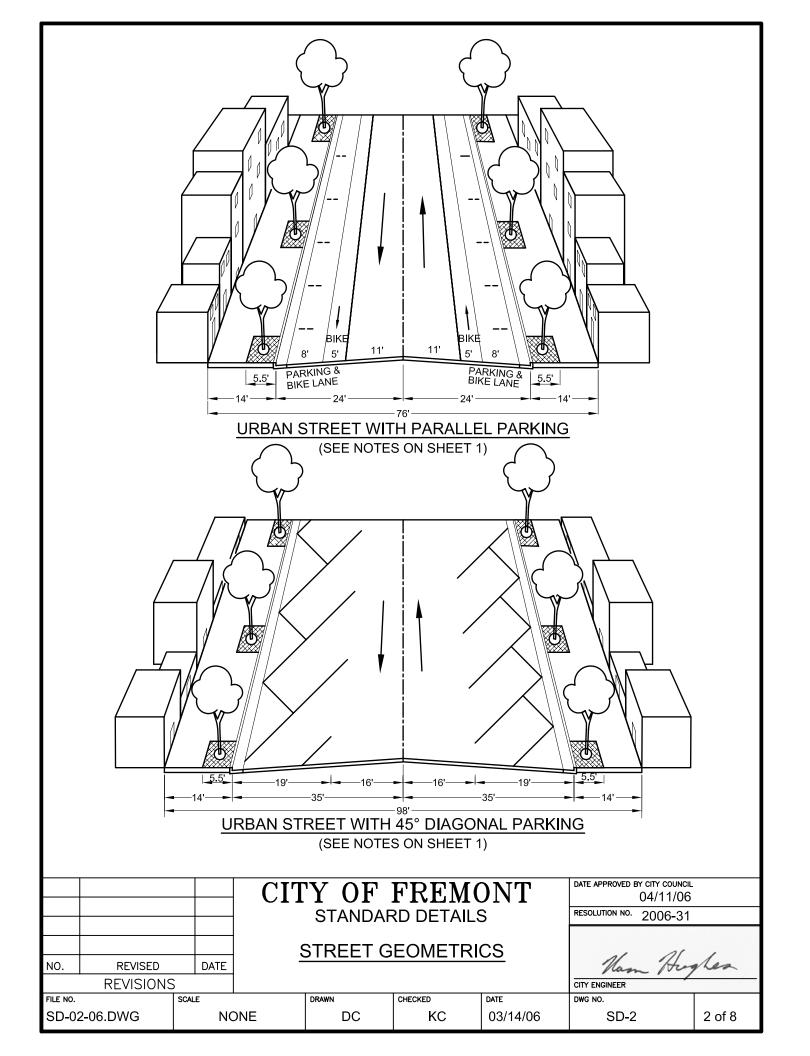
EXISTING	NEW	
JT	JT	JOINT TRENCH
		MAINLINE TRENCH
		SERVICE TRENCH
1	1	13" x 24" PG&E SUBSURFACE ENCLOSURE
2	2	17" x 30" PG&E SECONDARY SUBSURFACE ENCLOSURE
3	3	24" x 36" PG&E SUBSURFACE ENCLOSURE
4	4	30" x 48" PG&E SUBSURFACE ENCLOSURE
5	5	3'0" x 5'0" PG&E SUBSURFACE ENCLOSURE
7	7	4'6" x 8'6" PG&E PRIMARY SUBSURFACE ENCLOSURE
9	9	36" x 60" PG&E SUBSURFACE ENCLOSURE
		3'0" x 5'0" x 4'6" SUBSURFACE TRANSFORMER ENCLOSURE
		PADMOUNTED TRANSFORMER
PFS	PFS	PADMOUNTED FUSED SWITCH
		GAS TIE-IN HOLE
T	団	TELEPHONE SPLICE BOX
©	©	C.A.T.V. SPLICE BOX
$\langle \overline{\mathbb{M}} \rangle$	<b>™</b>	METER PEDESTAL
	⟨□⟩	IRRIGATION CONTROLLER
		TREE
	CITY OF FRI	EMONT  DATE APPROVED BY CITY COUNCIL 04/11/06
	STANDARD DE	

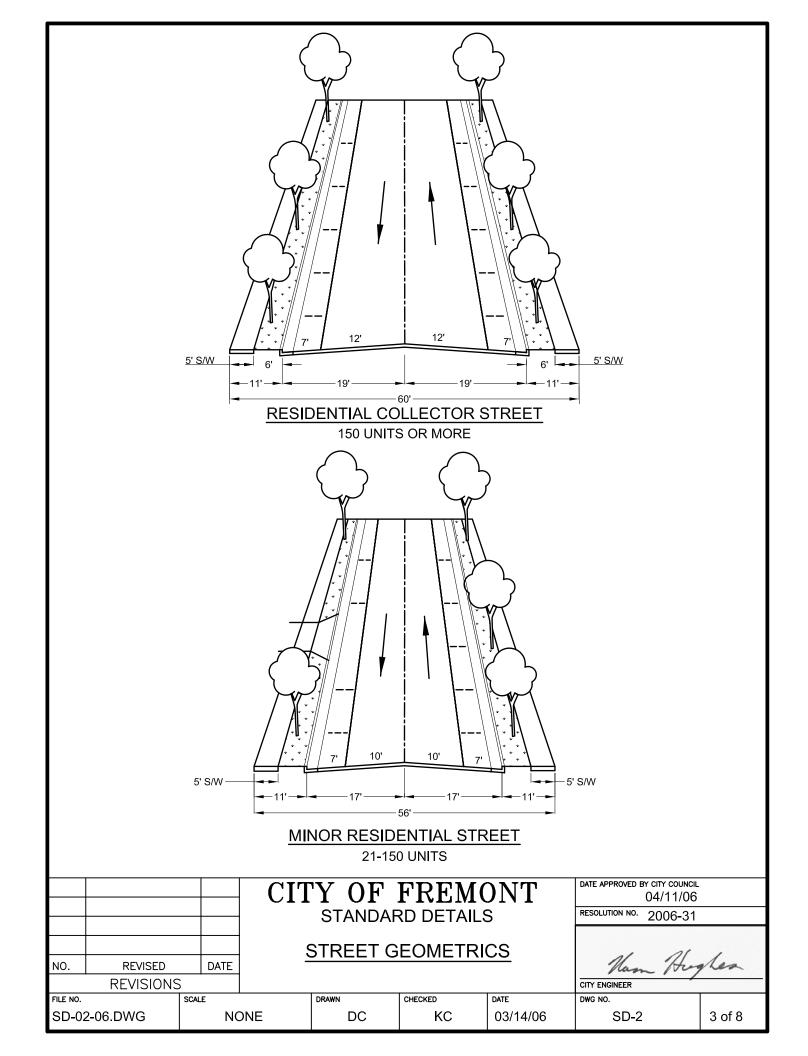
			CITY		FREMO		04/11/06	
			S	TANDAF	RD DETAILS	3	RESOLUTION NO. 2006-31	
NO.	REVISED	DATE		PG&E S	SYMBOLS		Nam Hay	Men
	REVISIONS	·					CITY ENGINEER	
FILE NO.	FILE NO. SCALE		DRAV	٧N	CHECKED	DATE	DWG NO.	
SD-01-05.DWG		NO	ONE	DC	KC	12/05/05	SD-1	2 of 2

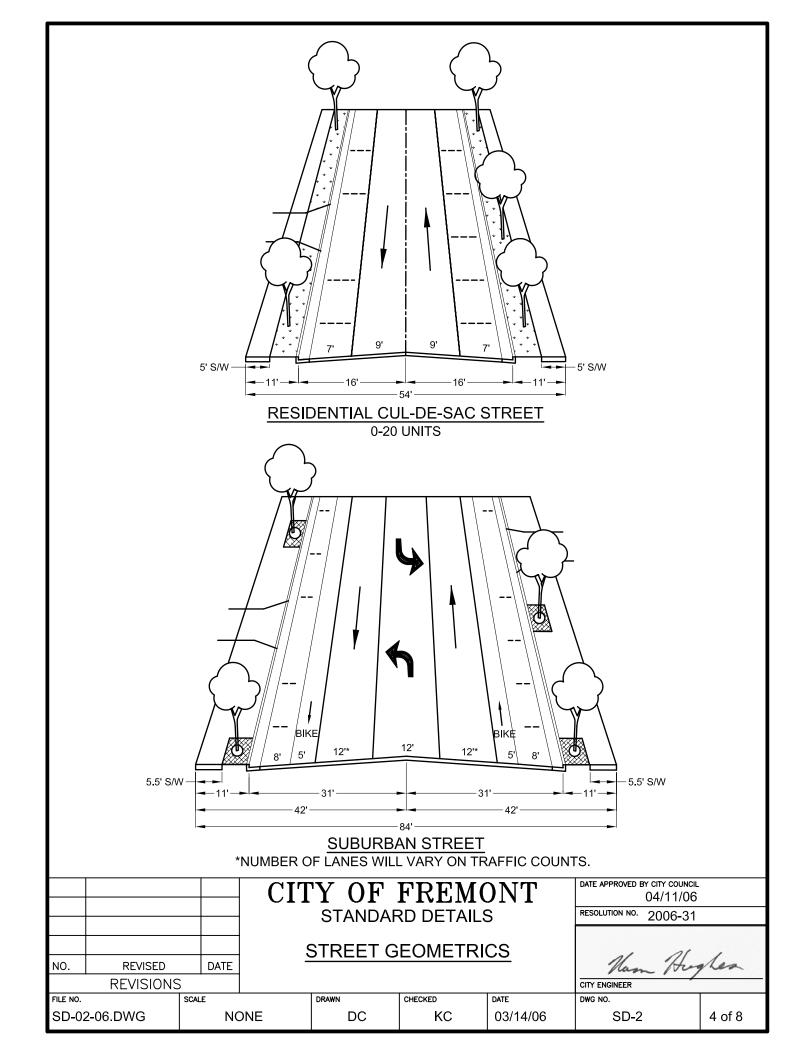
### STANDARD NOTES FOR THE STREET GEOMETRICS

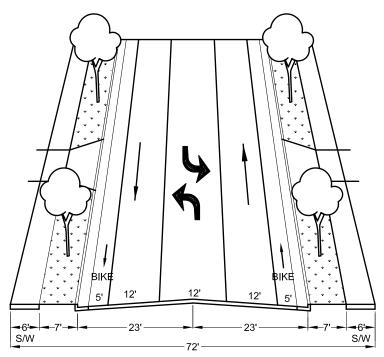
- 1. IN GENERAL, TRAVEL LANES SHALL BE 12' WIDE. DEPENDENT ON THE LAND USE, TRAFFIC VOLUMES, AND SPEED LIMIT, 11' WIDE TRAVEL LANES AND 10' WIDE LEFT TURN LANES MAY BE USED, SUBJECT TO APPROVAL BY THE CITY ENGINEER.
- 2. IN LOCATIONS WHERE "NO PARKING" IS DESIGNATED, THE PARKING LANE MAY BE REMOVED. IN NO CASES SHALL THE DISTANCE FROM FACE OF CURB TO FACE OF CURB BE LESS THAN 22'.
- 3. ADDITIONAL RIGHT-OF-WAY MAY BE NEEDED FOR BIKE ROUTES OR LANES PER THE BICYCLE AND PEDESTRIAN MASTER PLAN AND GENERAL PLAN. BIKE LANES TYPICALLY SHALL BE A MINIMUM OF 5' WIDE.
- 4. PARKWAY STRIPS MAY BE INCREASED FOR CLEAN WATER QUALITY USES, SUCH AS BIOSWALES. THE MINIMUM WIDTH FOR BIOSWALES AND STREET TREES IS 10' WIDE.
- 5. SIDEWALK WIDTHS FOR URBAN STREETS MAY VARY WITH A 14' MINIMUM WIDTH.
- 6. STREET WIDTHS MAY VARY IF BUILDING HEIGHTS ARE GREATER THAN 35'.

			<b></b>		FREMORD DETAILS		DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED	DATE	<u>s</u> -	STREET GEOMETRICS				Nes
REVISIONS							CITY ENGINEER	
FILE NO. SCALE SD-02-06.DWG NC		)NE	rawn DC	CHECKED KC	DATE 03/14/06	DWG NO. SD-2	1 of 8	

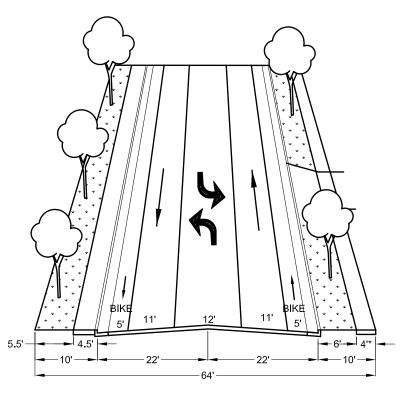








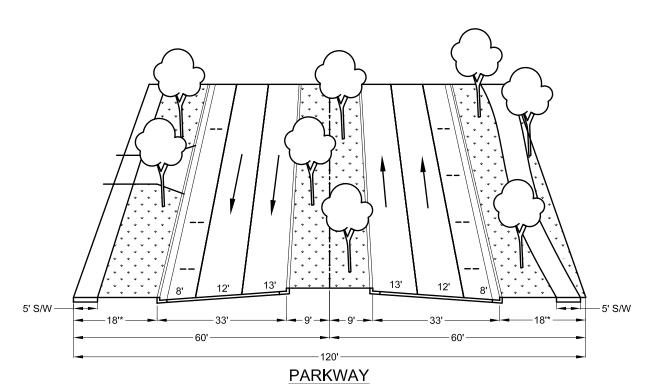
## COMMERCIAL / INDUSTRIAL STREET



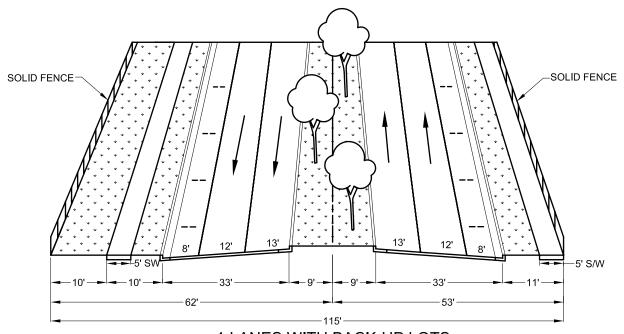
# **RETROFIT - EXISTING STREET WIDTH FOR MINOR INDUSTRIAL**

\*SIDEWALK WITH 5' x 5' LANDING EVERY 200'

			l CII	CITY OF B	FREMO	)NT	04/11/06	
				STANDARD DETAILS			RESOLUTION NO. 2006-31	
				STREET G	1/ 1/	,		
NO.	REVISED	DATE	_				Man Huy	Nes
	REVISIONS	3					CITY ENGINEER	
FILE NO. SCALE			DRAWN	CHECKED	DATE	DWG NO.		
SD-02-06.DWG		NO	ONE	DC	KC	03/14/06	SD-2	5 of 8

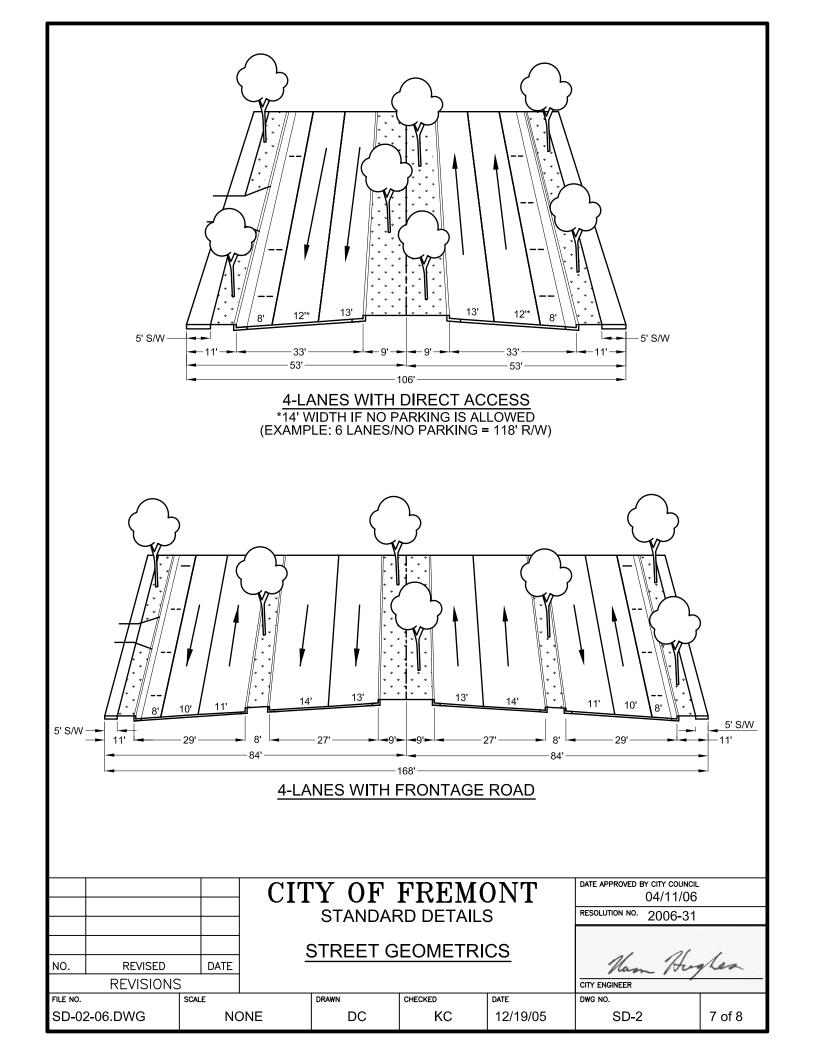


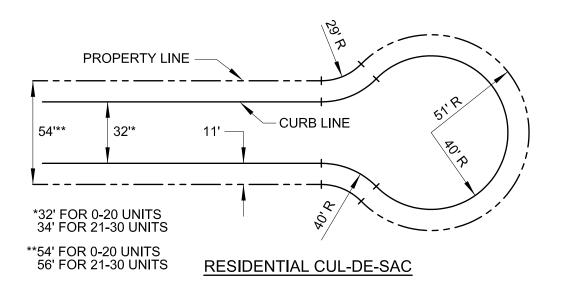
\* 19' WIDE SIDEWALK AND LANDSCAPE FOR 6-LANE PARKWAY

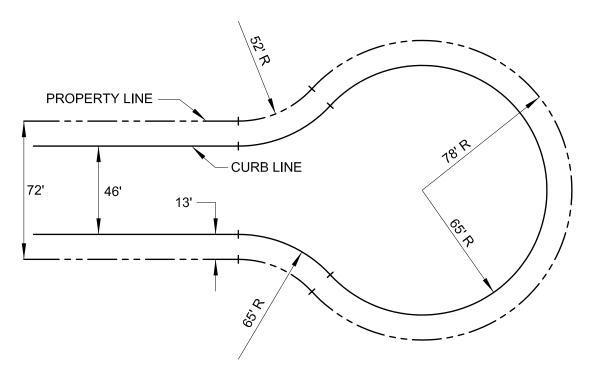


4-LANES WITH BACK-UP LOTS

			CIT	CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED	DATE	5	STREET G	EOMETRI	<u>CS</u>	Nam Hog	des
REVISIONS							CITY ENGINEER	
FILE NO.	FILE NO. SCALE			DRAWN	CHECKED	DATE	DWG NO.	
SD-02-06.DWG		NC	ONE	DC	KC	03/14/06	SD-2	6 of 8

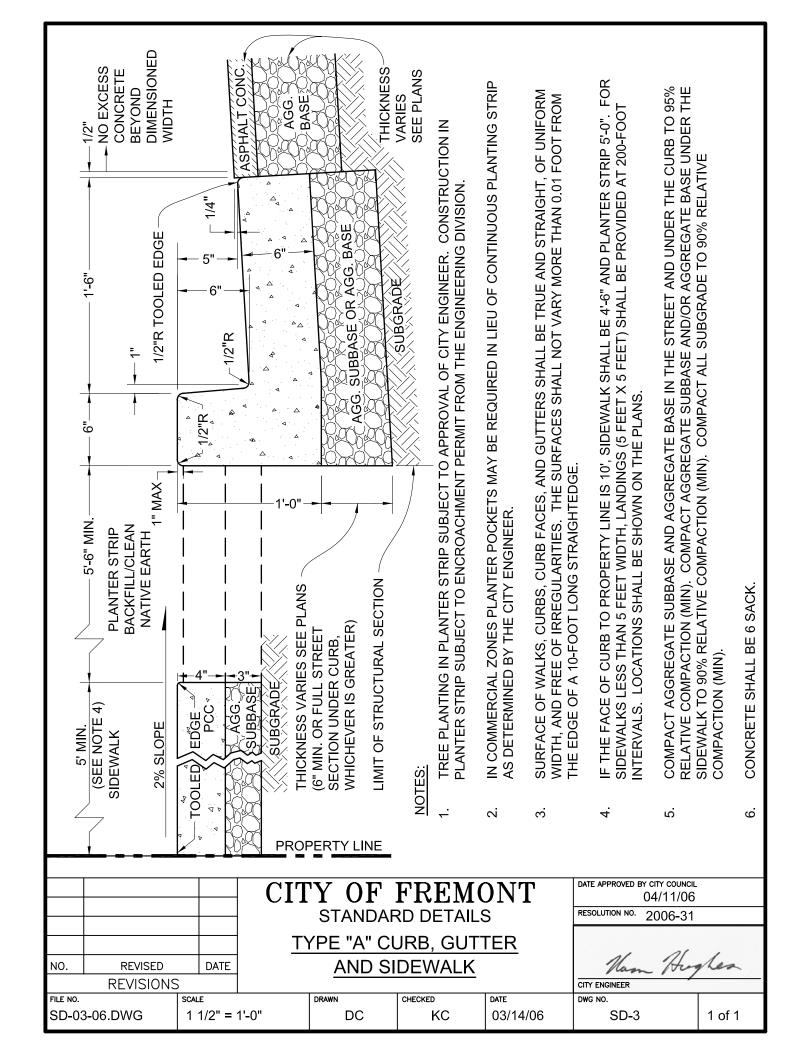


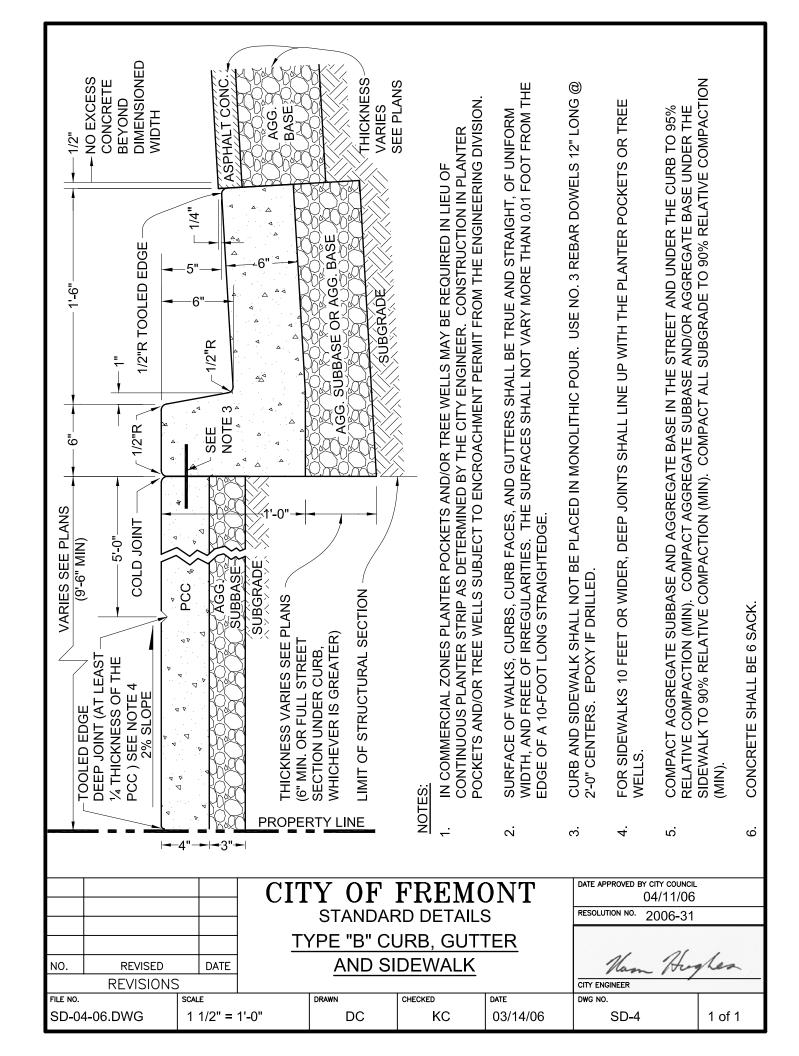


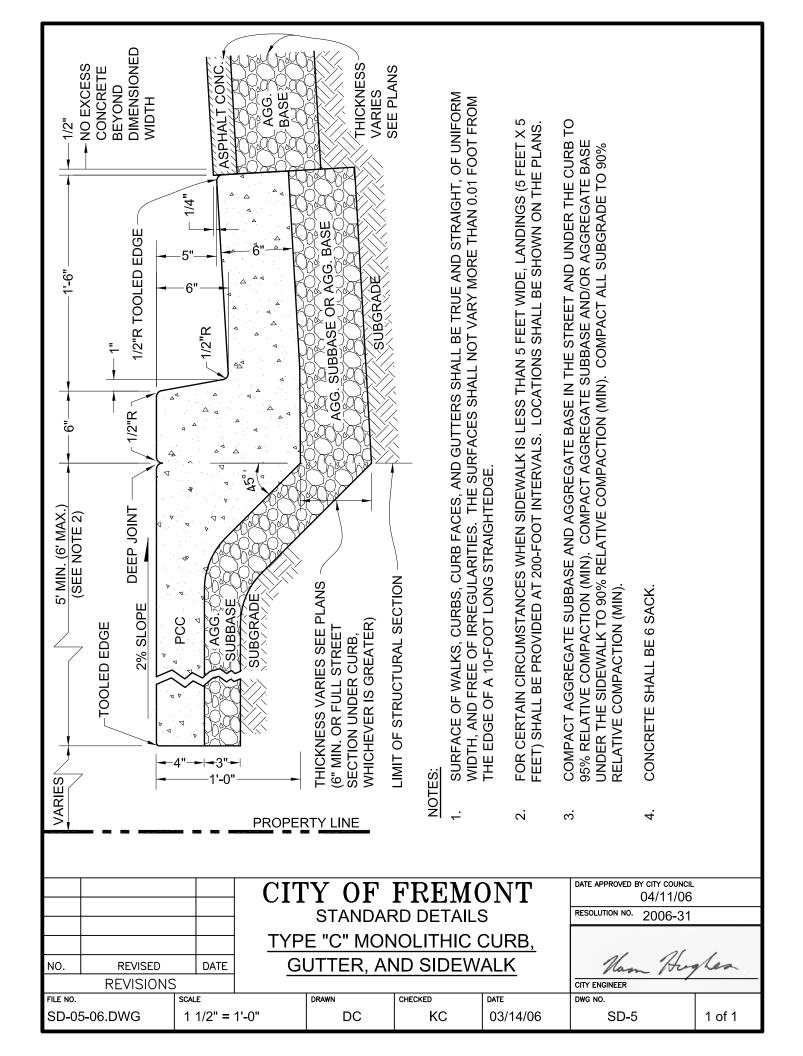


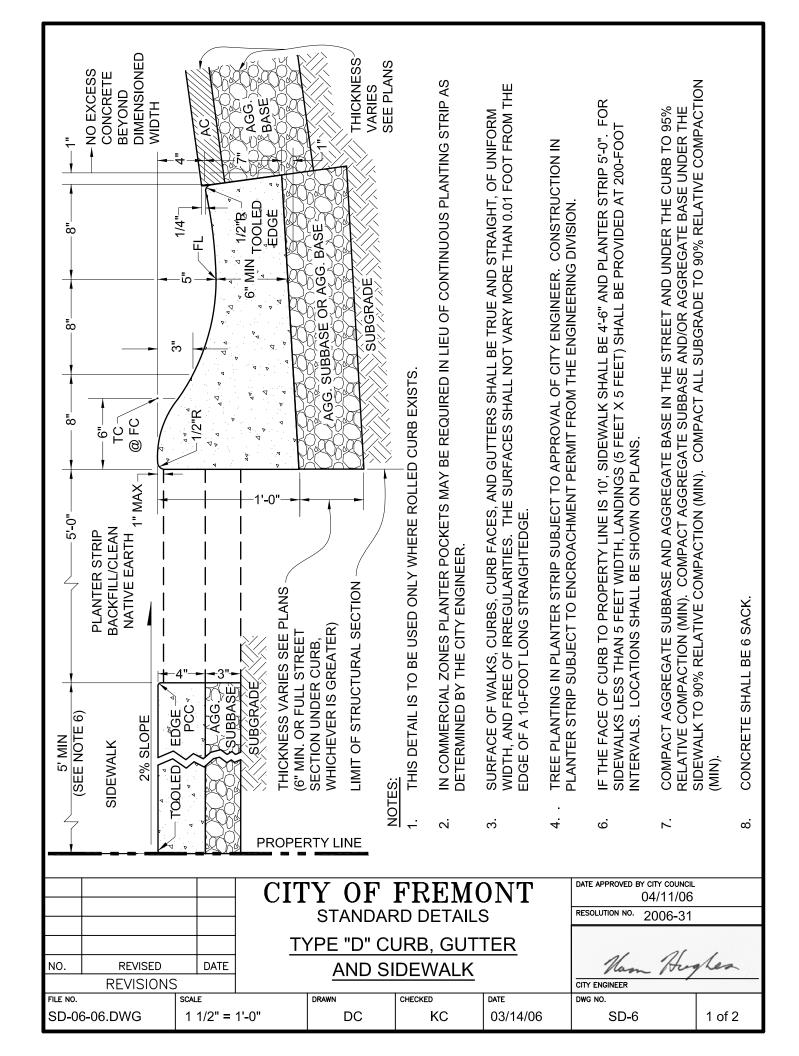
# COMMERCIAL / INDUSTRIAL CUL-DE-SAC

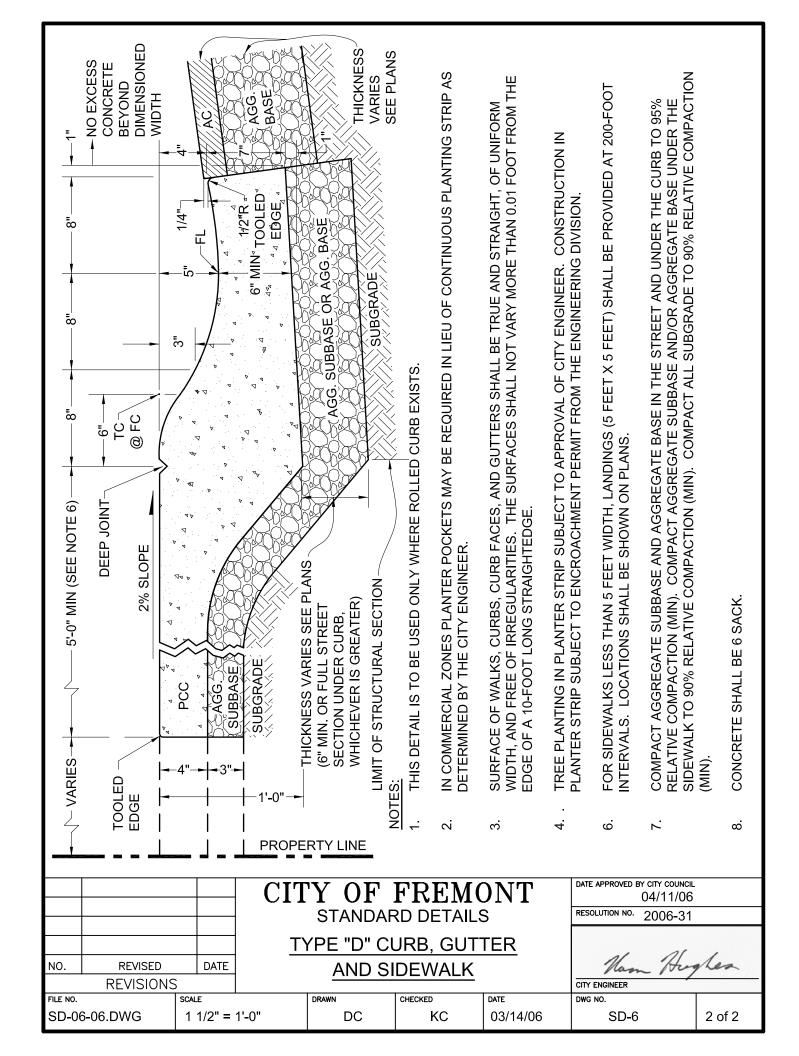
			CIT	CITY OF FREMONT STANDARD DETAILS					
				STREET G	FOMETRI	CS	1 11	,	
NO.	REVISED	DATE		<u> </u>		<del></del>	Man Hay	les	
	REVISIONS	ò					CITY ENGINEER		
FILE NO. SCALE				DRAWN	CHECKED	DATE	DWG NO.		
SD-02-06.DWG N		ONE	DC	KC	12/19/05	SD-2	8 of 8		

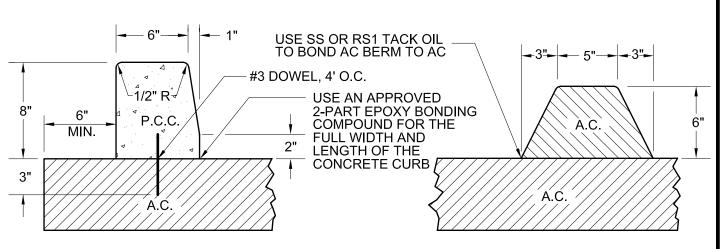










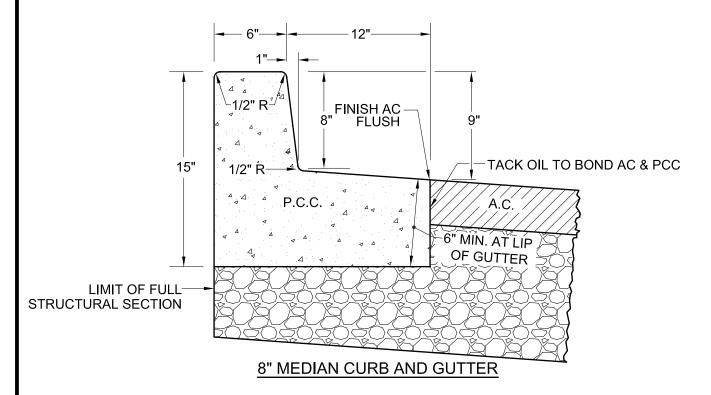


8" MEDIAN EXTRUDED CURB

6" EXTRUDED A.C. BERM

PLACE 6" #3 DOWELS (3" EMBEDDED INTO THE AC) 4' ON CENTER PRIOR TO EXTRUDING CURB

DOWELS MUST BE A TIGHT FIT OR EPOXIED INTO THE DOWEL HOLE



CITY OF FREMONT STANDARD DETAILS **MISCELLANEOUS REVISED CURB AND GUTTER DETAILS** NO. DATE

**REVISIONS** 

DATE APPROVED BY CITY COUNCIL 04/11/06 RESOLUTION NO. 2006-31

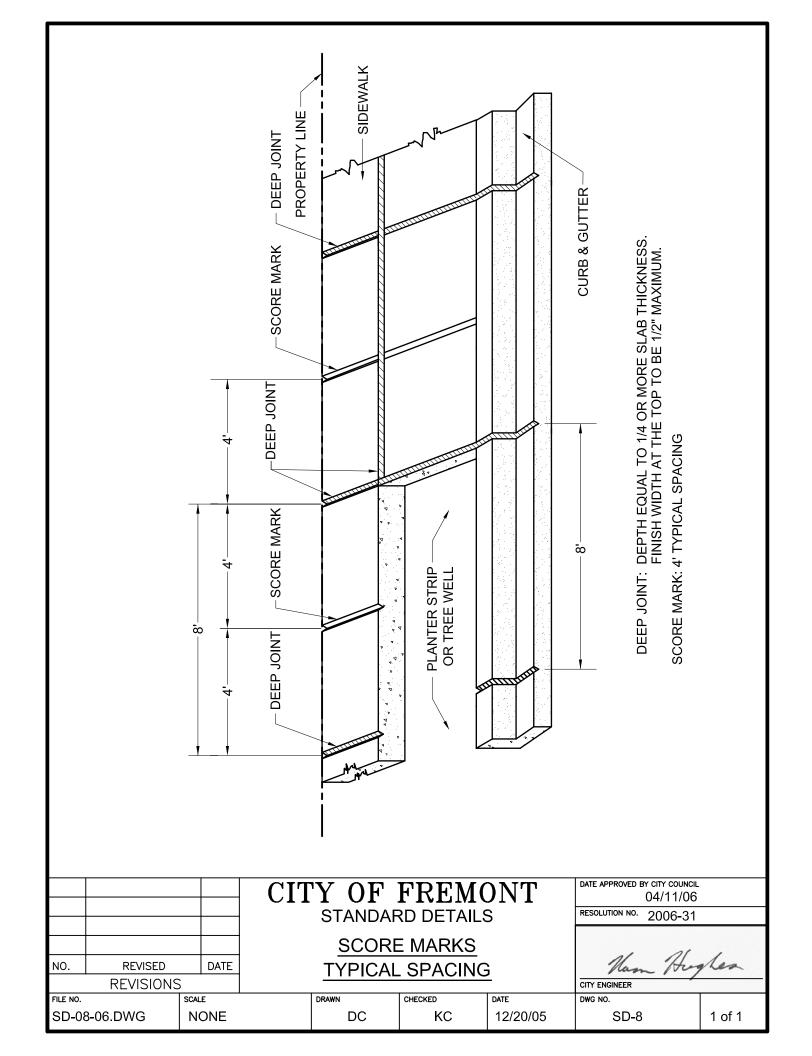
CITY ENGINEER

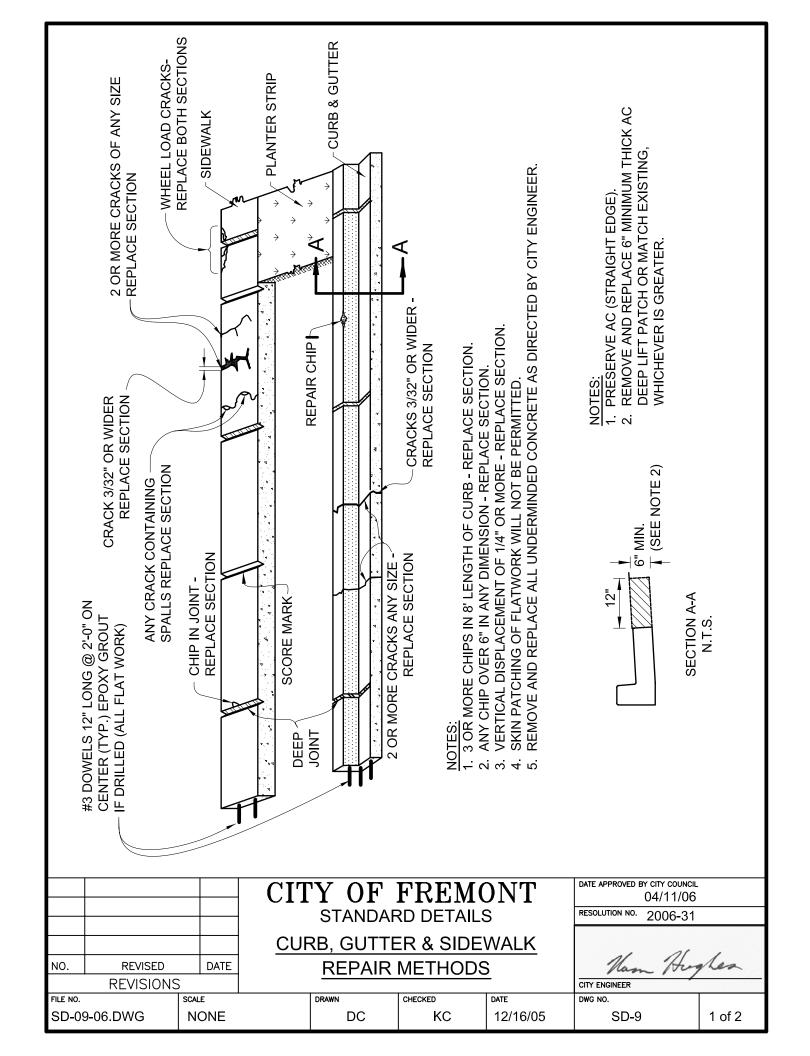
FILE NO. DRAWN CHECKED 1 1/2" = 1'-0" SD-07-06 DWG DC KC

03/14/06

DWG NO. SD-7

1 of 1

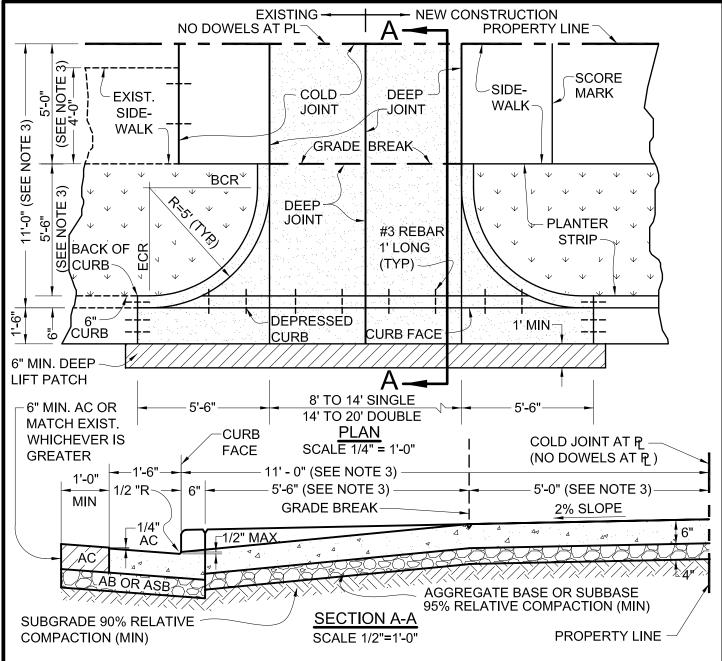




# **CONCRETE REPAIR METHODS**

- CONCRETE CURBS AND WALKS WHICH ARE DEFECTIVE FROM CRACKING, DISPLACEMENT, SPALLING, OR EXCESSIVE SURFACE CHECKING SHALL BE REPAIRED BY REMOVING AND REPLACING THE DEFECTIVE PORTIONS.
- 2. SURFACE CHIPS IN CURBS MAY BE REPAIRED BY AN EPOXY METHOD WHICH RESULTS IN A HARD SURFACED, NEAT PERMANENT REPAIR. SURFACE TEXTURE AND COLOR MUST MATCH ADJACENT CONCRETE. EPOXY ADHESIVE SHALL BE AN APPROVED TWO-PART EPOXY BONDING COMPOUND. SURFACES SHALL BE THOROUGHLY CLEANED PRIOR TO APPLICATION OF EPOXY. MORTAR SHALL HAVE CURING COMPOUND APPLIED. SURFACE PATCHING OF SIDEWALK WILL NOT BE ALLOWED.
- 3. WHEN DEFECTIVE PORTIONS OF CURBS OR WALKS ARE REMOVED, THEY SHALL BE REMOVED IN SEGMENTS BETWEEN SCORE MARKS AND/OR DEEP JOINTS. REPLACEMENT CONCRETE SHALL BE FORMED AND FINISHED TO THE SAME STANDARDS REQUIRED FOR NEW WORK. THE EDGE OF EXISTING ASPHALT PAVING WILL NOT BE USED AS A CURB FORM UNLESS APPROVED BY THE ENGINEER. WHEN CONCRETE BEING REPLACED IS NOT POURED MONOLITHIC, #3 REBAR 12" LONG SHALL BE PLACED AT 2'-0" ON CENTER A MINIMUM OF 3" INTO EXISTING CONCRETE. EPOXY GROUT IF DRILLED.
- 4. THE DEFECTIVE PORTIONS OF DRIVEWAY APPROACHES SHALL BE REMOVED BY SAWING OUT ALONG SCORES OR JOINTS AND REPLACING.
- 5. CRACKING OF CURBS, WALKS AND DRIVEWAY APRONS WILL REQUIRE REMOVAL AND REPLACEMENT WHEN THE FOLLOWING SITUATIONS OCCUR:
  - A. WHEN AN INDIVIDUAL CRACK IS 3/32" WIDE OR WIDER (THE APPROXIMATE WIDTH OF A NEW 5 CENT PIECE);
  - B. WHEN TWO OR MORE CRACKS OF ANY WIDTH OCCUR BETWEEN SCORES AND/OR EXPANSION JOINTS.
  - C. WHEN THREE OR MORE CHIPS OCCUR IN AN 8' LENGTH OF CURB.
  - D. ANY CHIP IN SIDEWALK.
- 6. USE #3 REBAR, 12" LONG, TO DOWEL NEW CONCRETE TO EXISTING CONCRETE.
- 7. DO NOT DOWEL PRIVATE IMPROVEMENTS TO PUBLIC IMPROVEMENTS.
- 8. WHEN REPLACING CURB AND GUTTER, A 12" WIDE, 6" MIN. THICK A.C. DEEP LIFT PATCH (OR MATCH EXISTING AC, WHICHEVER IS GREATER) IS REQUIRED.
- 9. ALL CONCRETE SHALL BE 6-SACK WITH 1-LB/CY OF LAMP BLACK (3" MAX SLUMP) PER CITY SPECIFICATIONS UNLESS COLOR OTHERWISE NOTED ON THE PLANS.

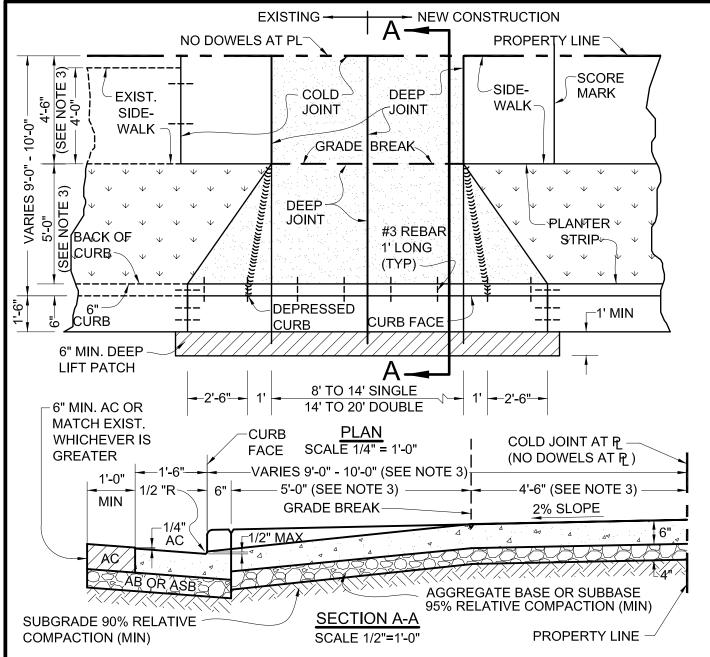
			CIT	CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED	DATE	<u>CUF</u>	CURB, GUTTER & SIDEWALK REPAIR METHODS				Nes
REVISIONS						_	CITY ENGINEER	
FILE NO. SCALE SD-09-06.DWG NONE			DRAWN DC	CHECKED KC	DATE 03/14/06	DWG NO. SD-9	2 of 2	
SD-09-06.DWG NONE				, KC	03/14/00	3D-9	2 01 2	



### NOTES:

- TREES AND HARDSCAPE IN PLANTER STRIP SUBJECT TO APPROVAL OF THE CITY ENGINEER.
   CONSTRUCTION IN PLANTER STRIP SUBJECT TO ENCROACHMENT PERMIT FROM ENGINEERING DIVISION.
- 2. FOR CURB AND SIDEWALK SCORING SEE SD-8. CONCRETE SHALL BE 6-SACK.
- 3. WHEN FACE OF CURB TO PROPERTY LINE EQUALS 10', SIDEWALK SHALL BE 4'-6" AND PLANTER STRIP SHALL BE 5'-0".
- 4. IF DRIVEWAY AND CURBS ARE NOT PLACED IN MONOLITHIC POUR USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.
- 5. LIMITS OF THE REMOVAL OF EXISTING CURB, GUTTER, SIDEWALK AND ASPHALT SHALL BE DETERMINED IN THE FIELD BY THE CITY INSPECTOR.

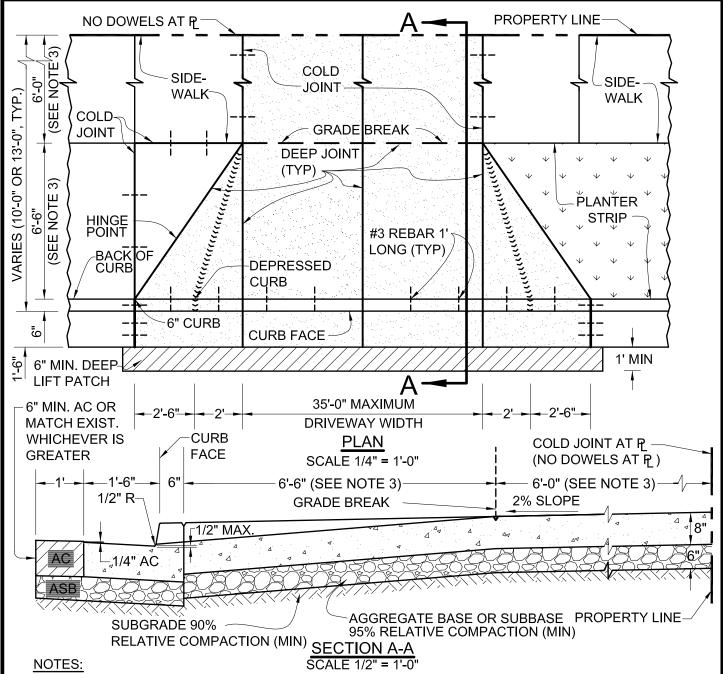
			CIT	CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED	DATE	TYPE				Nam Hu	plea
REVISIONS							CITY ENGINEER	
FILE NO. SCALE SD-10A-06.DWG AS SHC		WN	DRAWN DC	CHECKED KC	DATE 04/11/06	DWG NO. SD-10A	1 of 1	



### NOTES:

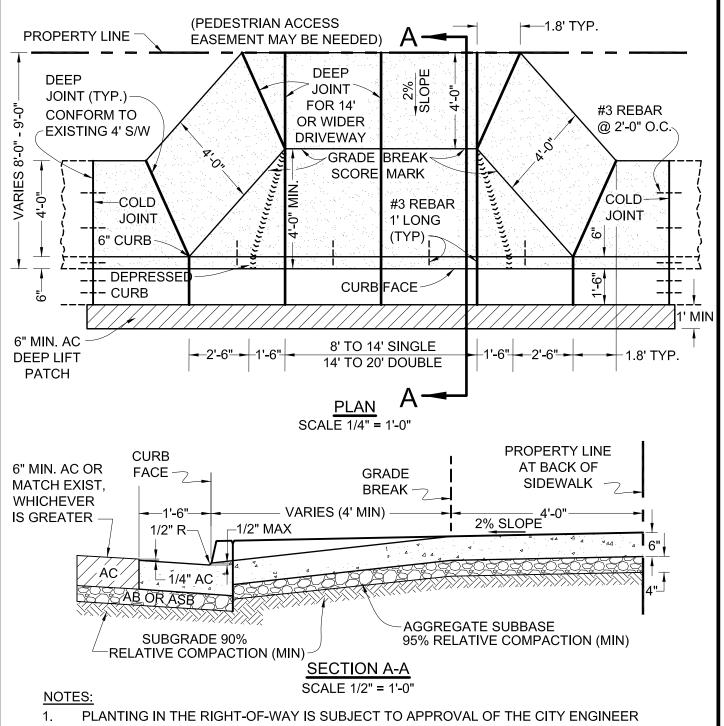
- TREES AND HARDSCAPE IN PLANTER STRIP SUBJECT TO APPROVAL OF THE CITY ENGINEER.
  CONSTRUCTION IN PLANTER STRIP SUBJECT TO ENCROACHMENT PERMIT FROM ENGINEERING
  DIVISION.
- 2. FOR CURB AND SIDEWALK SCORING SEE SD-8. CONCRETE SHALL BE 6-SACK.
- 3. WHEN FACE OF CURB TO PROPERTY LINE EQUALS 10', SIDEWALK SHALL BE 4'-6" AND PLANTER STRIP SHALL BE 5'-0".
- 4. IF DRIVEWAY AND CURBS ARE NOT PLACED IN MONOLITHIC POUR USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.
- 5. LIMITS OF THE REMOVAL OF EXISTING CURB, GUTTER, SIDEWALK AND ASPHALT SHALL BE DETERMINED IN THE FIELD BY THE CITY INSPECTOR.

			CIT	CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED	DATE		TYPE "A" DRIVEWAY APPROACH RESIDENTIAL - RETROFIT ONLY			Nam Huy	Nes
REVISIONS							CITY ENGINEER	
FILE NO. SCALE			DRAWN	CHECKED	DATE	DWG NO.		
SD-10B-06.DWG AS SHOW		WN	DC	KC	04/11/06	SD-10B	1 of 1	



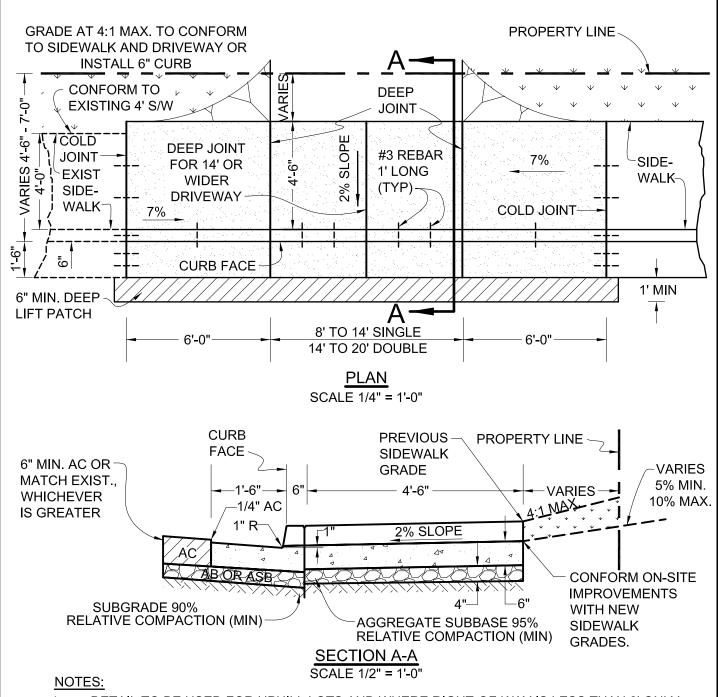
- 1. TREES AND HARDSCAPE IN PLANTER STRIP SUBJECT TO APPROVAL OF THE CITY ENGINEER. CONSTRUCTION IN PLANTER STRIP SUBJECT TO ENCROACHMENT PERMIT FROM ENGINEERING DIVISION.
- 2. FOR CURB AND SIDEWALK SCORING SEE SD-8. CONCRETE SHALL BE 6-SACK.
- 3. WHEN FACE OF CURB TO PROPERTY LINE EQUALS 10', SIDEWALK SHALL BE 4'-6" AND PLANTER STRIP SHALL BE 5'-0".
- 4. IF DRIVEWAY AND CURBS ARE NOT PLACED IN MONOLITHIC POUR USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.
- 5. LIMITS OF THE REMOVAL OF EXISTING CURB, GUTTER, SIDEWALK AND ASPHALT SHALL BE DETERMINED IN THE FIELD BY THE CITY INSPECTOR.

			CIT	CITY OF FREMONT STANDARD DETAILS				
			TYPE "B" DRIVEWAY APPROACH				. 26	
NO.	REVISED	DATE	COMMERCIAL/INDUSTRIAL				Man Huy	Les
	REVISIONS						CITY ENGINEER	
FILE NO. SCALE			DRAWN	CHECKED	DATE	DWG NO.		
SD-1	SD-11-06.DWG 1/4" = 1'-		-0"	DC	KC	03/14/06	SD-11	1 of 1



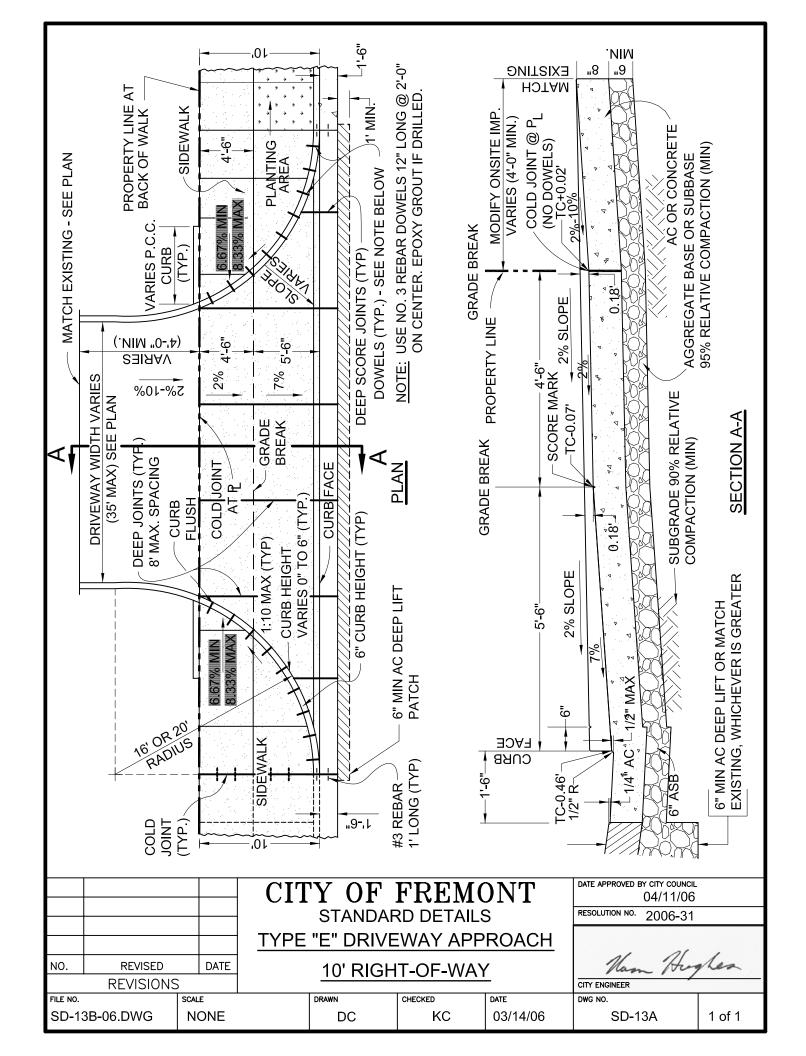
- AND IS SUBJECT TO ENCROACHMENT PERMIT FROM THE ENGINEERING DIVISION.
- FOR CURB AND SIDEWALK SCORING SEE SD-8. CONCRETE SHALL BE 6-SACK. 2.
- IF DRIVEWAY AND CURBS ARE NOT PLACED IN MONOLITHIC POUR, USE NO. 3 REBAR 3. DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.
- LIMITS OF THE REMOVAL OF EXISTING CURB, GUTTER, SIDEWALK AND ASPHALT SHALL BE 4. DETERMINED IN THE FIELD BY THE CITY INSPECTOR.

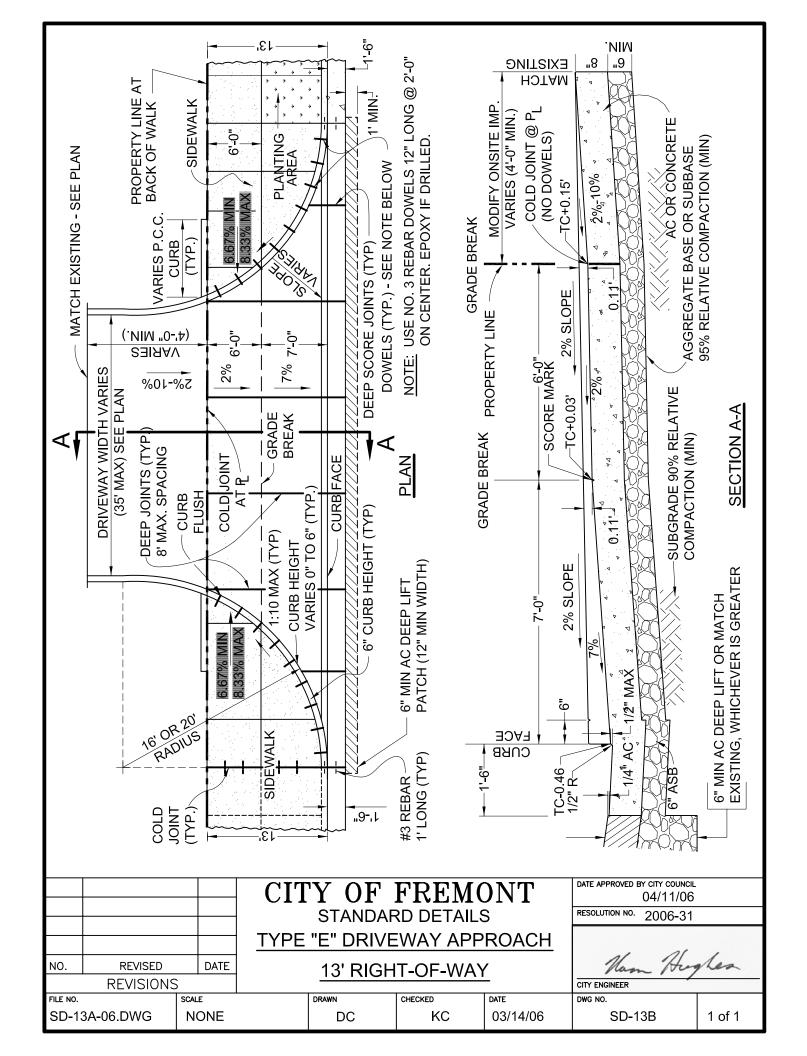
			CIT	Y OF	DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31			
NO.	REVISED	DATE		"D" DRIVE	Nam Hughen			
	REVISIONS	5	_			<u> </u>	CITY ENGINEER	
FILE NO. SCALE SD-12A-06.DWG AS S		HOWN	DRAWN DC	CHECKED	DATE 04/11/06	DWG NO. SD-12A	1 of 1	
30-	SD-12A-06.DWG AS S		TIOVVIN		I IC	04/11/00	3D-12A	1 01 1

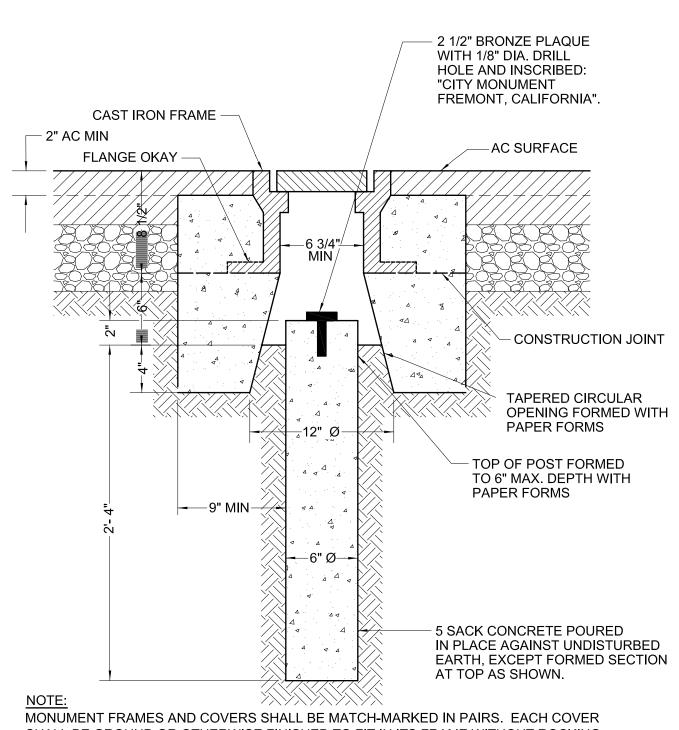


- DETAIL TO BE USED FOR UPHILL LOTS AND WHERE RIGHT-OF-WAY IS LESS THAN 8' ONLY.
- 2. PLANTING IN THE RIGHT-OF-WAY IS SUBJECT TO APPROVAL OF THE CITY ENGINEER AND IS SUBJECT TO ENCROACHMENT PERMIT FROM ENGINEERING DIVISION.
- 3. FOR CURB AND SIDEWALK SCORING SEE SD-8. CONCRETE SHALL BE 6-SACK.
- 4. IF DRIVEWAYS AND CURBS ARE NOT PLACED IN MONOLITHIC POUR USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.
- 5. LIMITS OF THE REMOVAL OF EXISTING CURB, GUTTER, SIDEWALK AND ASPHALT SHALL BE DETERMINED IN THE FIELD BY THE CITY INSPECTOR.

			CITY OF FREMONT				DATE APPROVED BY CITY COUNCI 04/11/06 RESOLUTION NO. 2006-31	}		
NO.	REVISED	DATE		TYPE "D" DRIVEWAY APPROACH CASE 2 - RESIDENTIAL				Nam Hughen		
	REVISIONS	5	<del>-</del>				CITY ENGINEER			
FILE NO. SCALE			DRAWN	CHECKED	DATE	DWG NO.				
SD-12B-06.DWG AS SH		AS SHO	WN	DC	KC	03/14/06	SD-12B	1 of 1		

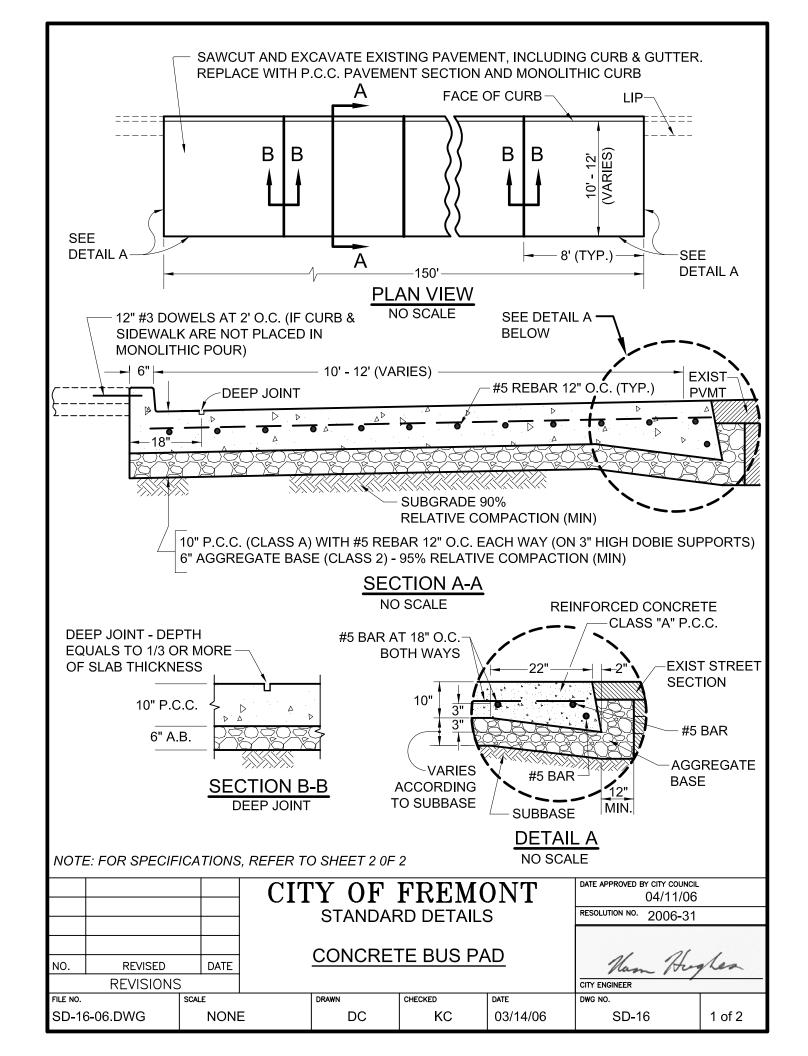






MONUMENT FRAMES AND COVERS SHALL BE MATCH-MARKED IN PAIRS. EACH COVER SHALL BE GROUND OR OTHERWISE FINISHED TO FIT IN ITS FRAME WITHOUT ROCKING. AT THE OPTION OF THE CONTRACTOR, MONUMENT FRAMES AND COVERS SHALL BE FORNI "IRON SIDES" TYPE 80-60-03; PHOENIX, TYPE P-2001, MONROE, D & L FOUNDRY AND SUPPLY, OR APPROVED EQUAL.

			CIT	CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED	DATE	<u>C</u>	ONCRETE	Nam Hughen			
	REVISIONS	5					CITY ENGINEER	
FILE NO. SCALE			DRAWN	CHECKED	DATE	DWG NO.		
SD-14-06.DWG 1 1/2" =		1 1/2" =	1'-0"	DC	KC	03/14/06	SD-14	1 of 1



### **BUS STOP PAVEMENT SPECIFICATIONS**

- 1. WHERE A PORTION OF THE EXISTING SURFACING IS TO BE REMOVED, THE OUTLINE OF THE AREA TO BE REMOVED SHALL BE CUT ON A NEAT LINE WITH A POWER DRIVEN SAW BEFORE REMOVING THE SURFACING. DEPTH OF CUT MUST BE DEEP ENOUGH TO PREVENT DAMAGE TO ANY PORTION OF THE SURFACING THAT IS TO REMAIN IN PLACE. SURFACING AND BASE SHALL BE REMOVED WITHOUT DAMAGE TO SURFACING THAT IS TO REMAIN IN PLACE.
- 2. CURBS AND CONCRETE BUS PAD SHALL CONFORM TO THE PROVISIONS IN SECTION 73, "CONCRETE CURBS AND SIDEWALKS," OF THE CALTRANS STANDARD SPECIFICATIONS.
- 3. PORTLAND CEMENT CONCRETE SHALL CONFORM TO THE PROVISIONS IN SECTION 90, "PORTLAND CEMENT CONCRETE," OF THE 1992 CALTRANS STANDARD SPECIFICATIONS.

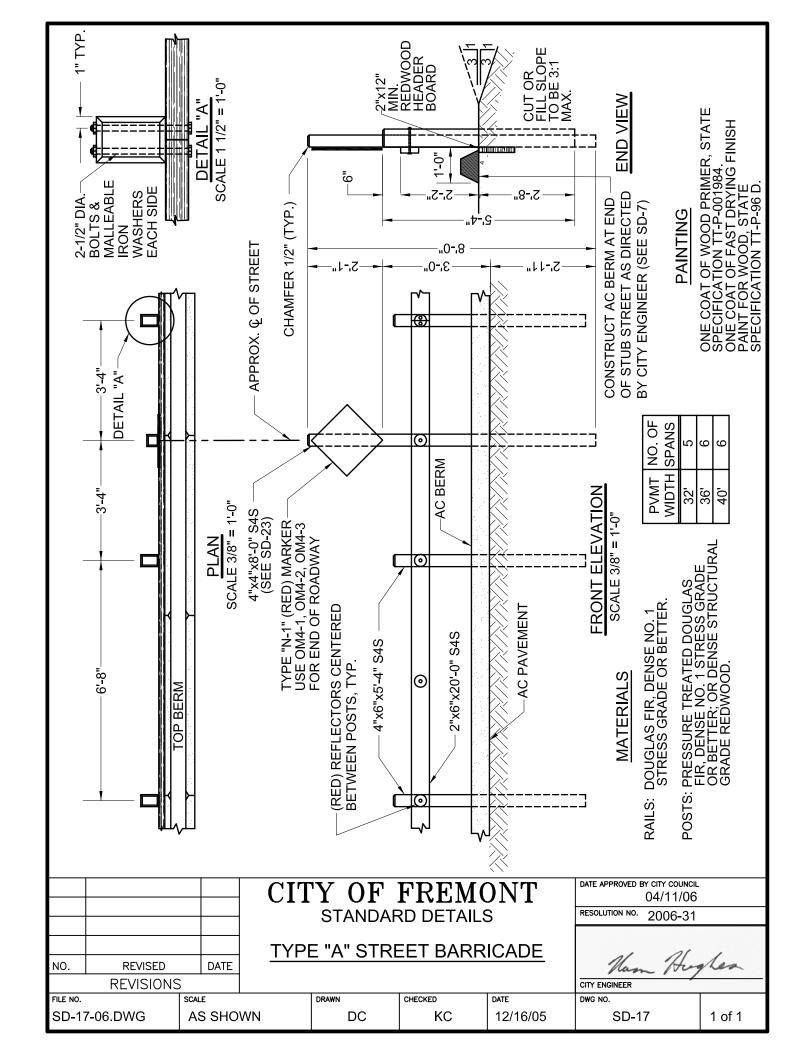
FOR CONSTRUCTION ON NEW BUS PADS NOT IN SERVICE: CONCRETE FOR CURBS AND BUS PAD SHALL BE 6-SACK CONCRETE. CONCRETE SHALL BE DARKENED WITH ONE POUND OF LAMP BLACK PER CUBIC YARD AND HAVE A MAXIMUM OF 3" SLUMP. CONCRETE SHALL REACH 4,000 PSI WITHIN 28-DAYS. NO TRAFFIC OR CONTRACTOR'S EQUIPMENT WILL BE PERMITTED ON THE PAVEMENT BEFORE A PERIOD OF TEN (10) CALENDAR DAYS HAS ELAPSED OR UNTIL ACHIEVING 2,500 PSI, WHICHEVER OCCURS FIRST, AFTER THE CONCRETE HAS BEEN PLACED.

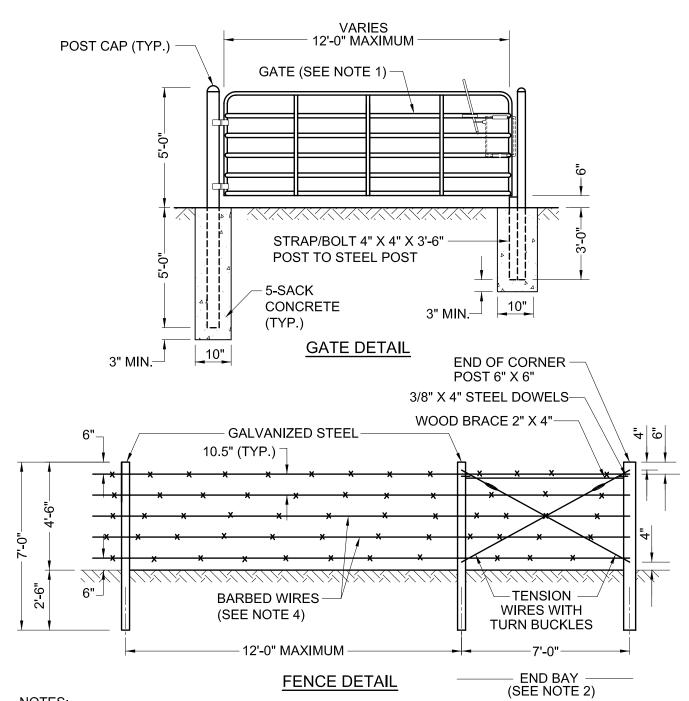
FOR CONSTRUCTION ON BUS PADS BEING REPLACED AND/OR IN USE:
CONCRETE SHALL BE DARKENED WITH ONE POUND OF LAMP BLACK PER CUBIC YARD AND HAVE A
MAXIMUM OF 3" SLUMP. CONCRETE SHALL REACH 4,000 PSI WITHIN 48 HOURS, AND 7,000 PSI WITHIN
28 DAYS. NO TRAFFIC OR CONTRACTOR'S EQUIPMENT WILL BE PERMITTED ON THE PAVEMENT
BEFORE A PERIOD OF 48-HOURS HAS ELAPSED AFTER THE CONCRETE HAS BEEN PLACED.

ALL CONCRETE WORK SHALL BE WATER TESTED IN THE PRESENCE OF THE ENGINEER BEFORE FINAL FINISHING.

- 4. THE CONTRACTOR SHALL USE THE CURING COMPOUND METHOD FOR CURING CONCRETE. THE CURING COMPOUND SHALL BE CURING COMPOUND (6) AS SPECIFIED IN SECTION 90-7.01B, "CURING COMPOUND METHOD," OF THE 1992 CALTRANS STANDARD SPECIFICATIONS. THE CURING COMPOUND SHALL BE APPLIED IN A MANNER THAT WILL PROVIDE A COMPLETE COATING OF ALL EXPOSED FACES OF THE CONCRETE SURFACE.
- 5. WHERE THE CURB IS REMOVED, THE ENTIRE SECTION OF THE CURB BETWEEN SCORE MARKS SHALL BE REMOVED AND REPLACED. HORIZIONTAL DOWELS FOR PROPOSED CURB AND GUTTER TO BE TIED INTO EXISTING CURB AND GUTTER SHALL BE #3 GRADE 60 STEEL REINFORCING BARS. HORIZONTAL DOWELS SHALL BE 12 INCHES LONG AND EPOXIED IN HOLES DRILLED INTO THE EXISTING CONCRETE. DOWELS SHALL BE PLACED PRIOR TO PLACEMENT OF NEW ADJACENT CONCRETE.
- 6. EPOXY SHALL CONFORM TO THE PROVISIONS IN SECTION 95, "EPOXY," OF THE CALTRANS STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL PREPARE THE PAVEMENT SURFACE PRIOR TO APPLICATION ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

			CIT	Y OF	FREMO	EMONT  Date approved by city council 04/11/06			
				STANDARD DETAILS			RESOLUTION NO. 2006-31		
NO.	REVISED REVISIONS	DATE		CONCRET	ΓE BUS PA	<u>ND</u>	Man Hughen		
FILE NO. SCALE			DRAWN	CHECKED	DATE	DWG NO.			
SD-16-06.DWG		NON	E	WPM	KC	03/14/06	SD-16	2 of 2	

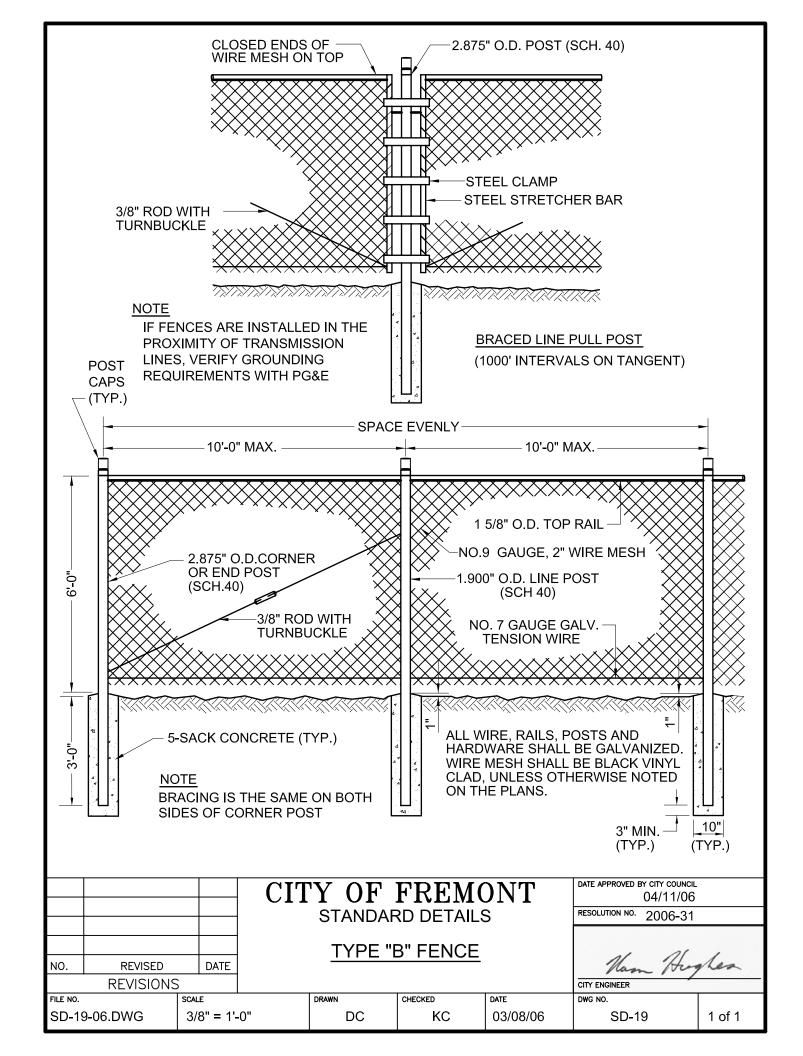


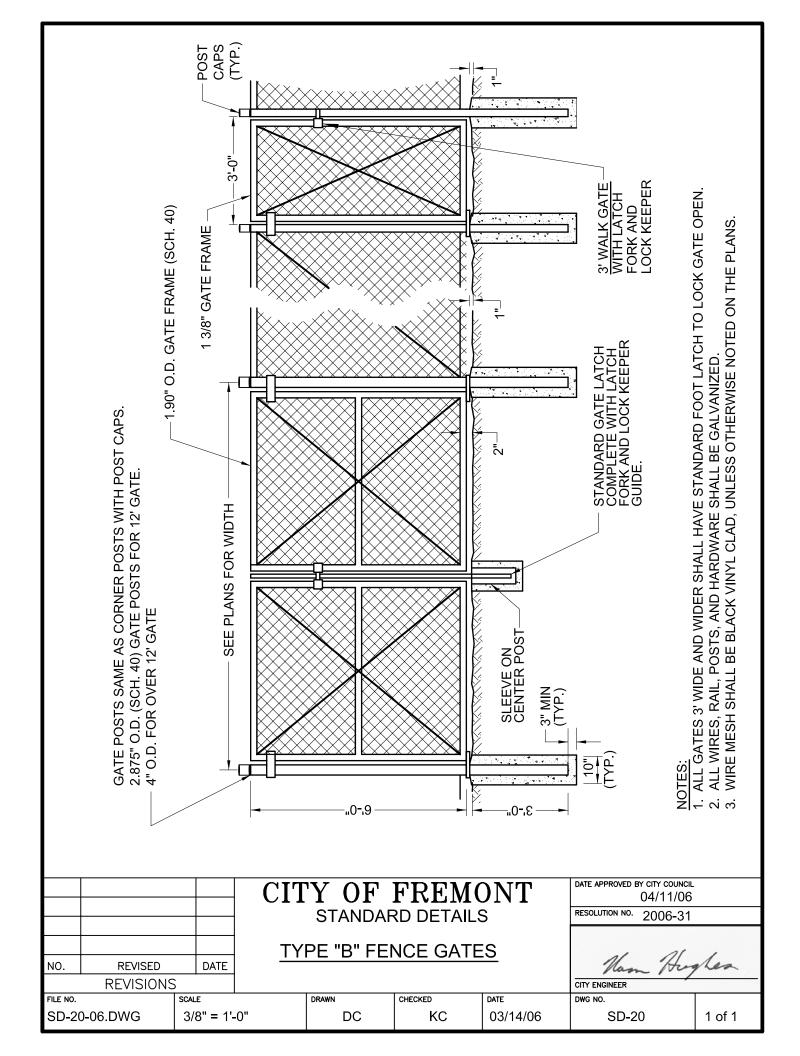


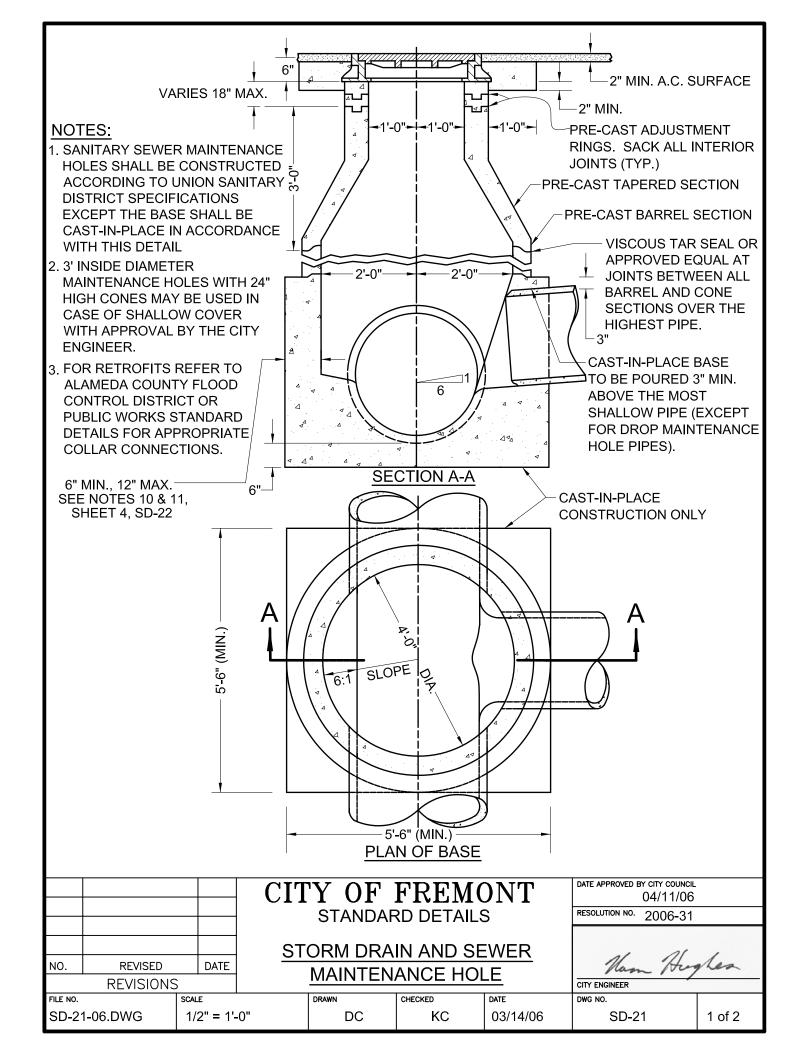
#### NOTES:

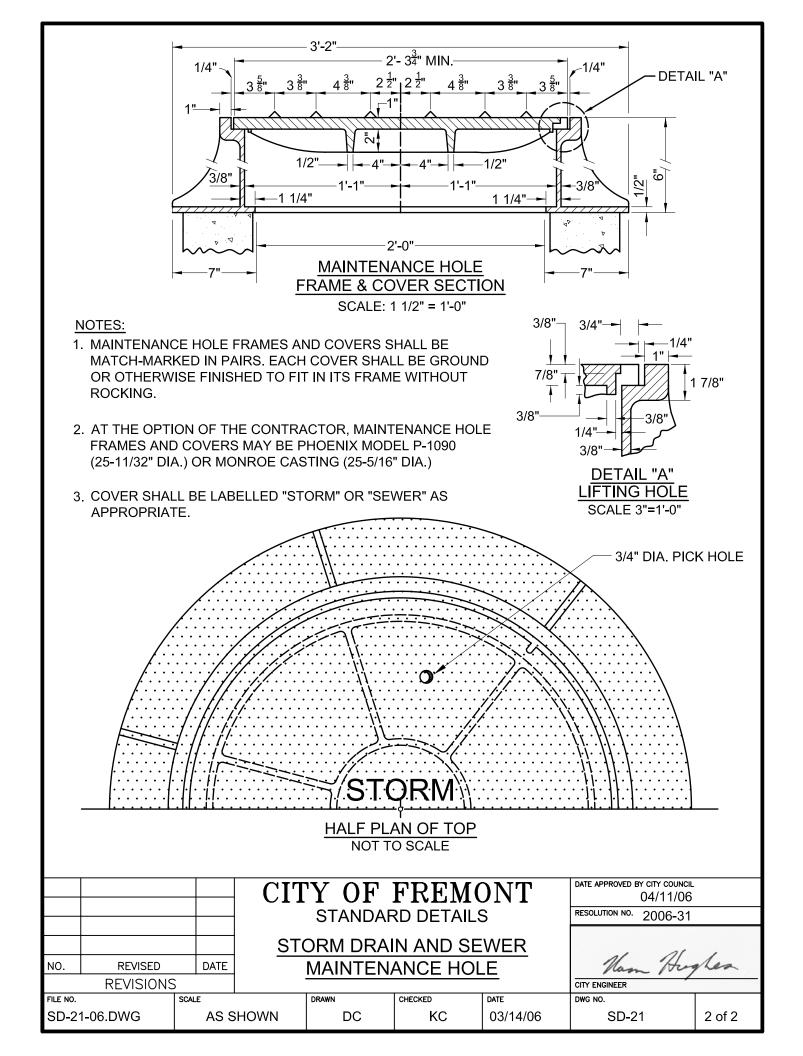
- 1. FOR ADDITIONAL DETAILS ON THE GATE, REFER TO EAST BAY REGIONAL PARK DISTRICT DETAILS (FARM VEHICLE GATE).
- 2. USE END BAY AT TIE IN WITH EXISTING FENCES AND AT ANGLE POINTS IN RIGHT-OF-WAY AND AT GATES.
- 3. USE GALVANIZED STEEL FOR THE POSTS.
- 4. FOR BARBED WIRES, USE 2 STRANDS OF 12 1/2 GA. WIRE TWISTED WITH 2 POINT 14 GA. BARBS SPACED 5" APART.

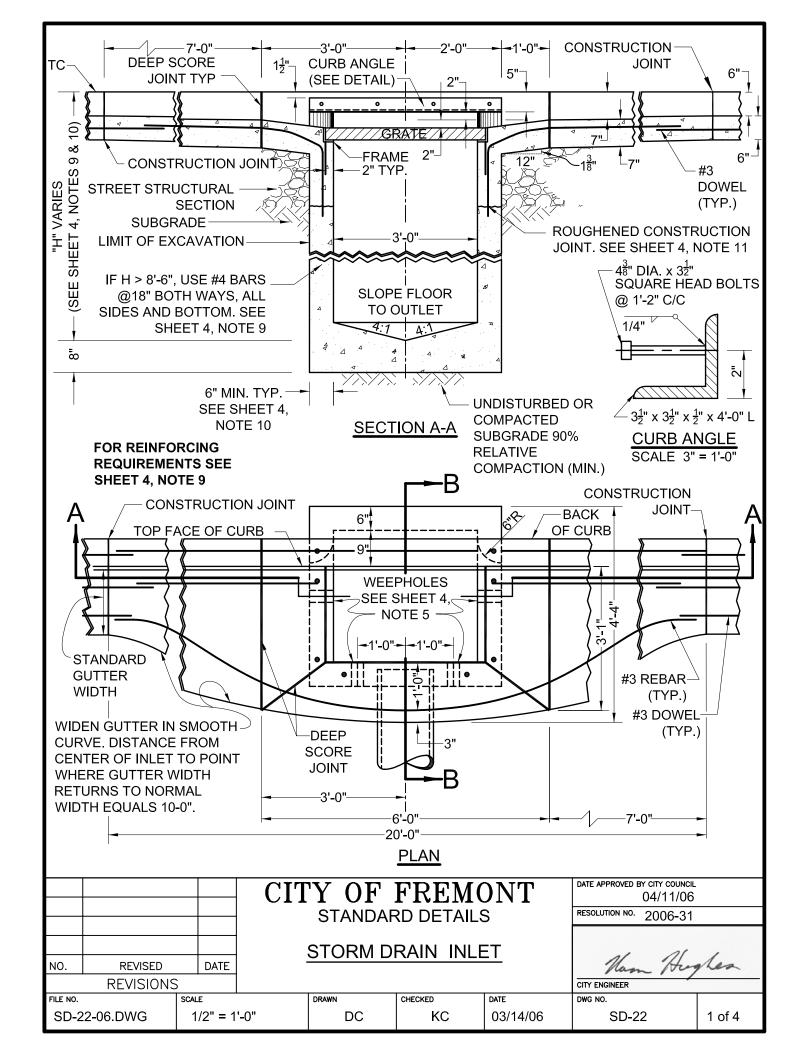
			CIT	CITY OF FREMONT STANDARD DETAILS				
NO.	REVISED	DATE	TYPI	E "A" FENC	Man Hughen			
	REVISIONS					CITY ENGINEER		
FILE NO.	FILE NO. SCALE			DRAWN	CHECKED	DATE	DWG NO.	
SD-1	SD-18-06.DWG 1/4" = 1'-		-0"	DC KC 03/08/06		03/08/06	SD-18	1 of 1

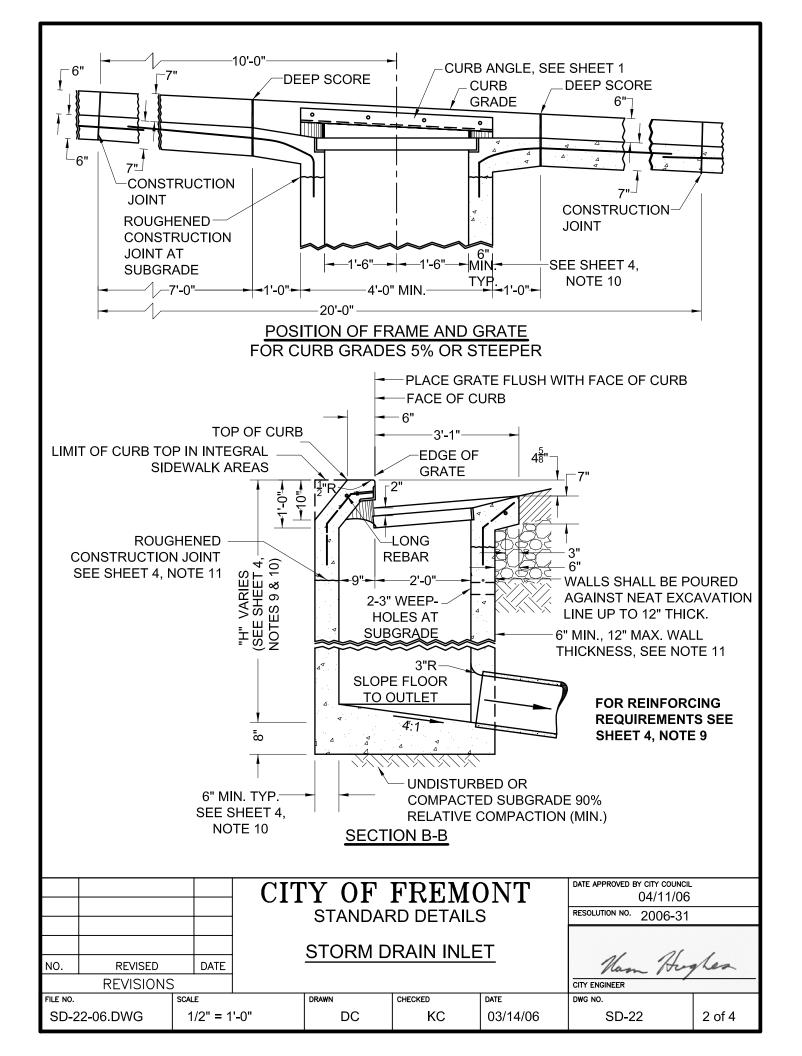


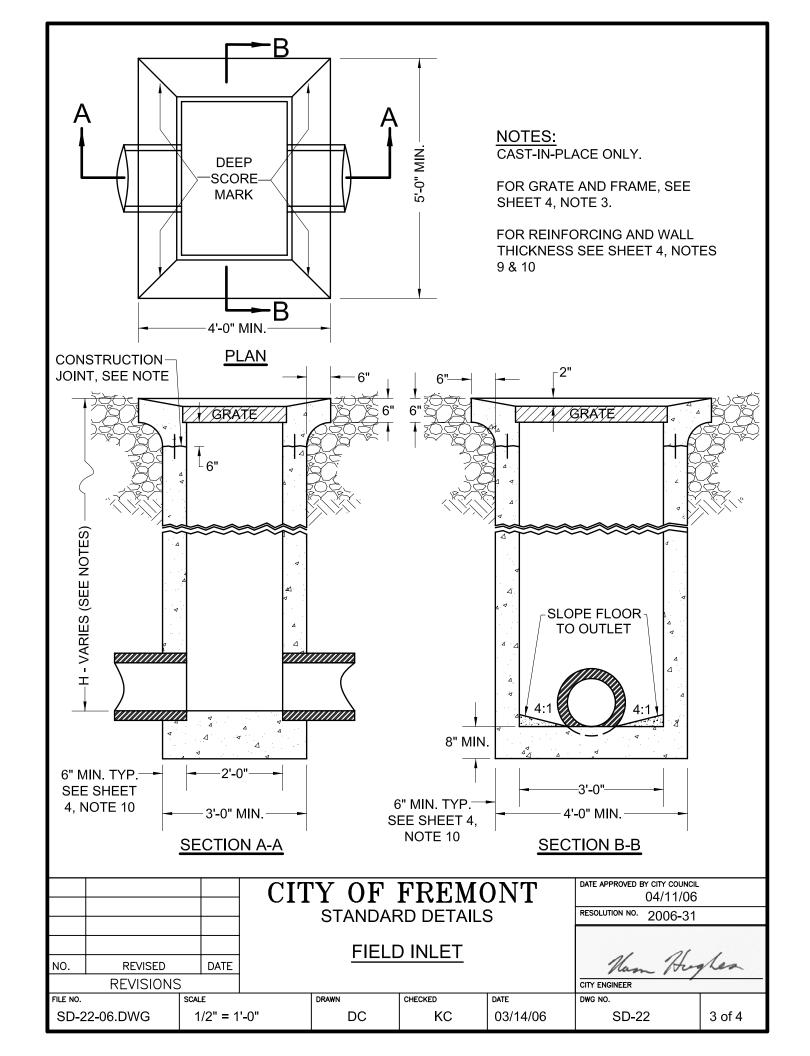








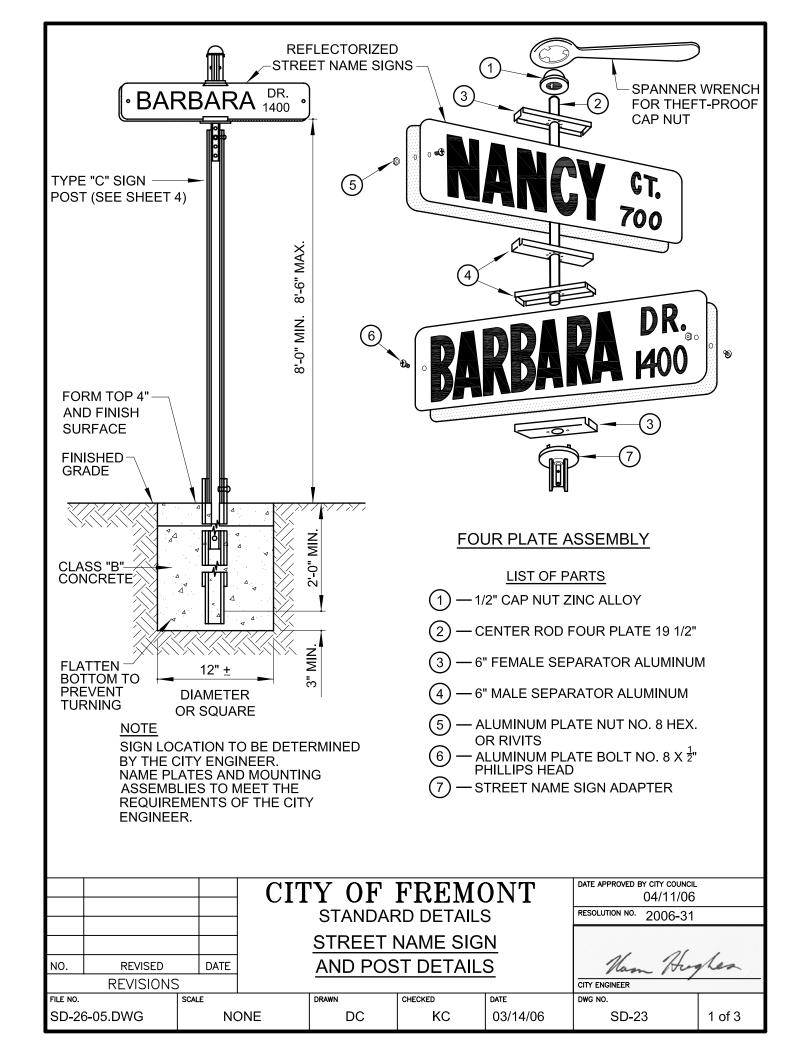


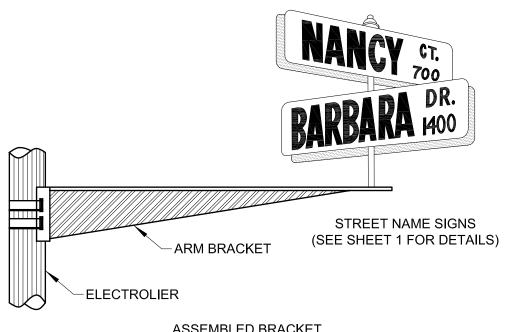


# STORM DRAIN INLET NOTES

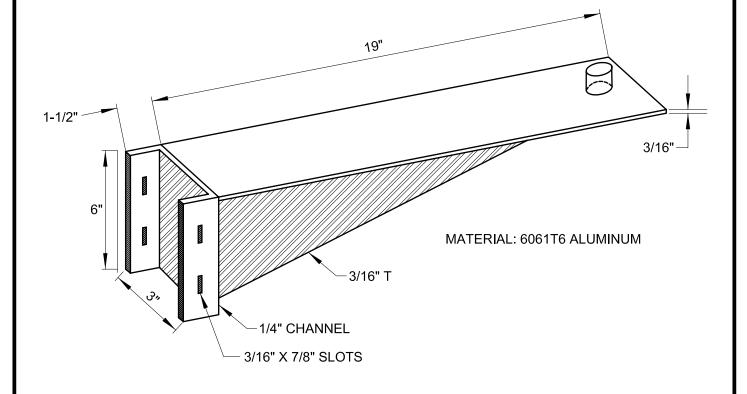
- ALL INLETS TO BE CAST-IN-PLACE ONLY.
- 2. ALL METAL SHALL BE STRUCTURAL GRADE STEEL OR BETTER AND SHALL BE GALVANIZED AFTER FABRICATION. AFTER INSTALLATION ABRADED SURFACES SHALL BE CLEANED FREE OF RUST AND OIL AND NEATLY SOLDERED OVER WITH 50-50 SOLDER.
- 3. GRATING AND FRAMES ARE TO BE ASSEMBLED AND MADE TO FIT BEFORE DELIVERY TO JOB SITE. THE REQUIRED GRATE IS TYPE 600-13 AS DESIGNATED BY CAL TRANS STANDARD DETAIL D77A AND D77B.
- 4. ALL CONCRETE SHALL BE 6-SACK CONCRETE.
- 5. TWO 3" WEEPHOLES TO BE PLACED AT ALL THE WALLS OF THE STORM DRAIN INLET AT THE STREET SUBGRADE ELEVATION (OR UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER).
- 6. POSITION OF PIPE LEAVING INLET TO BE AS INDICATED ON THE PLANS AND INLET FLOOR TO SLOPE TO END OF PIPE. WHERE TWO OR MORE PIPES ENTER AN INLET, THE FLOOR SHALL HAVE A CHANNEL CONNECTING THE PIPE.
- 7. MINIMUM CLEAR SPACING BETWEEN SURFACES OF CONCRETE AND REINFORCING STEEL TO BE 2" EXCEPT 3" WHERE CONCRETE IS PLACED AGAINST EARTH.
- 8. NO CONSTRUCTION JOINTS TO BE PLACED OTHER THAN WHERE SHOWN ON THE PLANS, EXCEPT WITH APPROVAL OF THE CITY ENGINEER.
- 9. WALL REINFORCING NOT REQUIRED WHEN H=8'-6" OR LESS AND THE UNSUPPORTED WIDTH OR LENGTH = 7' OR LESS. WALLS EXCEEDING THESE LIMITS SHALL BE REINFORCED WITH NO.4 BARS @ 18" CENTERS PLACED 2" (SECTION A-A ON SHEET 1) CLEAR TO INSIDE OF BOX. A MINIMUM OF 3 VERTICAL BARS PER WALL SHALL BE INSTALLED. "H" IS DIFFERENCE IN ELEVATION BETWEEN OUTLET PIPE INVERT AND TOP OF CURB.
- 10. WALL THICKNESS "T" SHALL BE "T" = 6" MIN. FOR "H" TO 8'-6", "T" = 8" FOR "H" = 8'-7" TO 20'; T = 12" MAX IN ANY CASE.
- 11. CONSTRUCTION JOINTS AT SUBGRADE SHALL BE REINFORCED WITH TWO, 24" LONG NO. 4 BARS AND EXTEND 6" MINIMUM BELOW SUBGRADE.
- 12. STENCIL "NO DUMPING DRAINS TO BAY" ON ALL DRAIN INLETS IN ACCORDANCE WITH THE CITY'S SPECIFICATIONS. THE STENCIL AND APPLICATION SPECIFICATIONS CAN BE PURCHASED AT THE CITY'S ENGINEERING COUNTER.
- 13. ALL CURB INLET BOXES MUST BE POURED NEAT UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.
- 14. IN THE EVENT OF OVEREXCAVATION, CURB INLET OUTER WALL SHALL BE FORMED AND THE RESULTING VOID BETWEEN THE FORM AND EXCAVATION SHALL BE BACK-FILLED WITH CLASS II AB, COMPACTED TO 90%. THE RESULTING VOID SHALL BE A MINIMUM OF 12" WIDE TO FACILITATE PROPER COMPACTION.

NO.	REVISED	DATE	INLET	NOTES		Nan Hughen		
	REVISIONS	; '				CITY ENGINEER	/-	
FILE NO.		SCALE	DRAWN CHECKED DATE			DWG NO.		
SD-2	22-06.DWG	NONE	DC KC 03/14/06			SD-22	4 of 4	



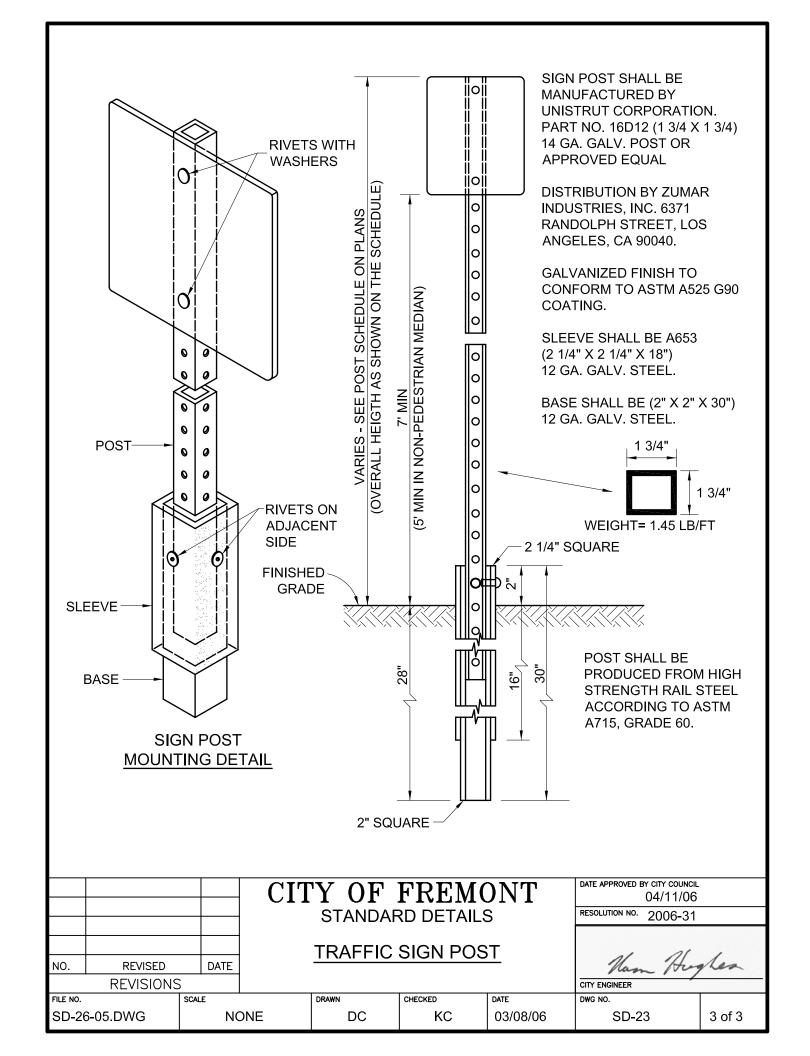


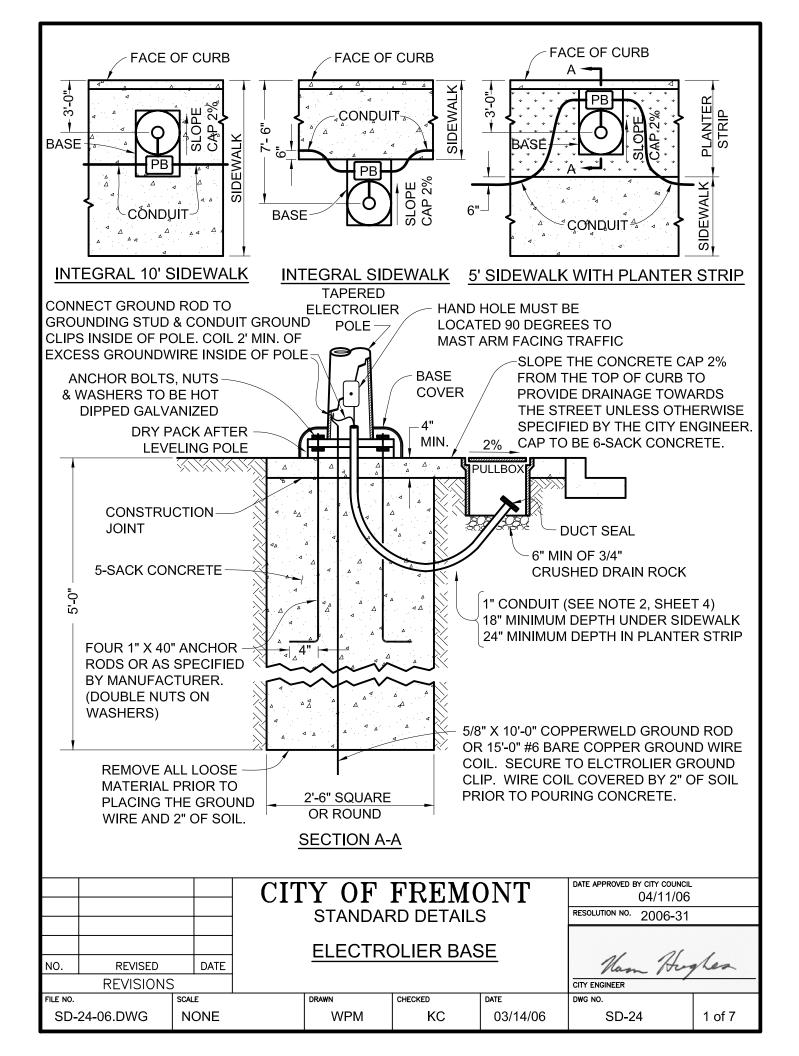
# **ASSEMBLED BRACKET**

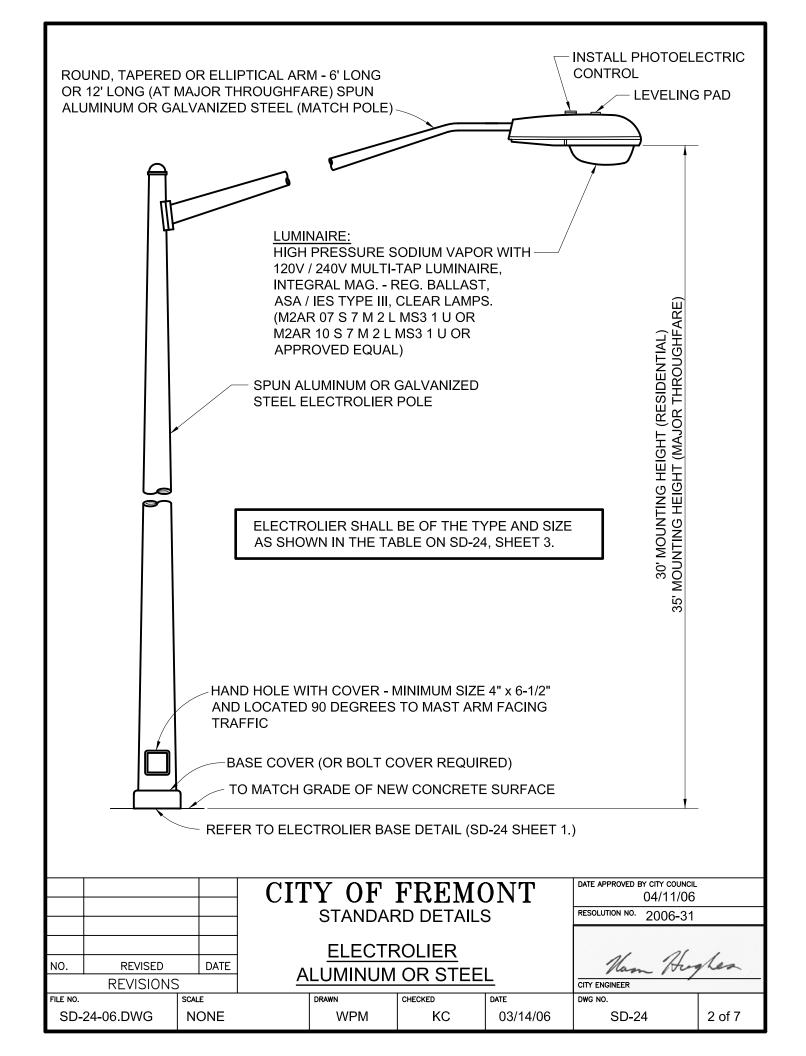


# ARM BRACKET FOR ELECTROLIER

			CIT	Y OF	FREMO	ONT	DATE APPROVED BY CITY COUNCIL 04/11/06	
				STANDARD DETAILS			RESOLUTION NO. 2006-31	
	STREET NAME SIGN				. 21			
NO.	REVISED	DATE		AND POST DETAILS			Man Huy	Nes
	REVISIONS	<u>`</u>				_	CITY ENGINEER	
FILE NO.	FILE NO. SCALE			DRAWN	CHECKED	DATE	DWG NO.	
SD-26-05.DWG NO		ONE	DC	KC	03/14/06	SD-23	2 of 3	







# ELECTROLIER TYPE (OR EQUAL)

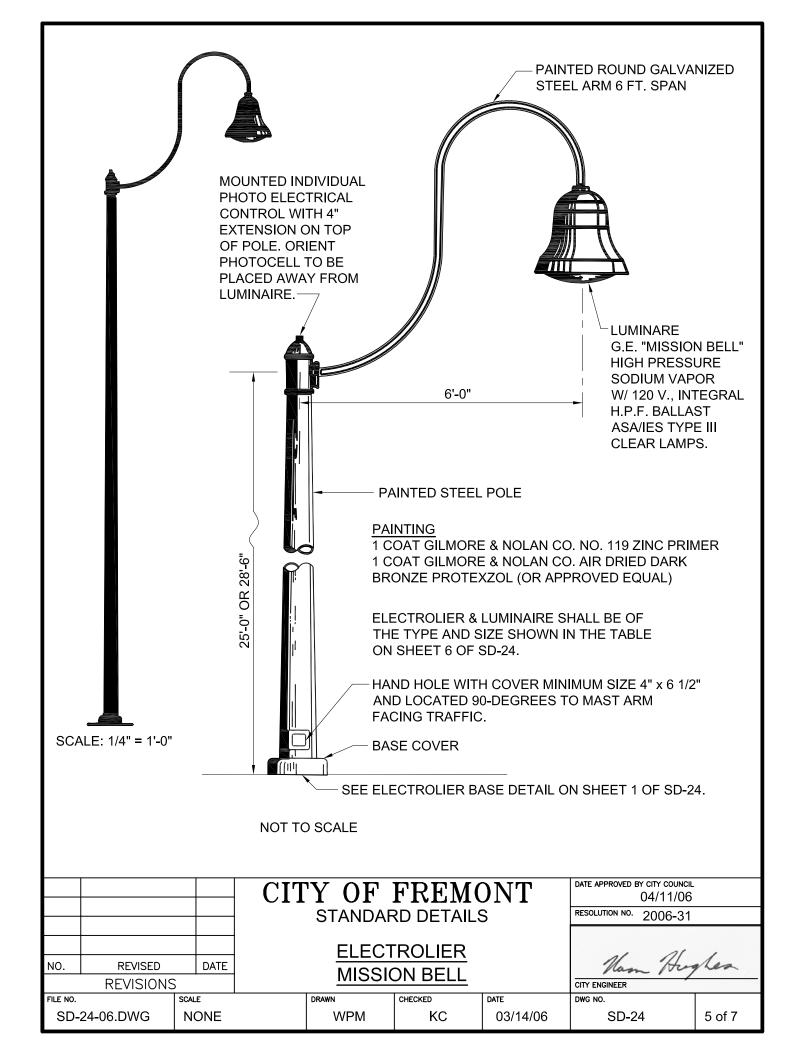
GALVANIZED STEEL	Double 6' Arms	VALMONT DS32-750A286-6D	AMERON PL-286D-2	VALMONT DS32-800A336-6D		AMERON PL-336D-2		
GALVANIZ	Single 6' Arms	VALMONT DS32-750A286-6S	AMERON PL-286-2	VALMONT DS32-800A336-6S		AMERON PL-336-2		
UMINUM	Double 6' Arms	SEE CITY OF FREMONT STANDARD SPECIFICATIONS SECTION 32	CO 21-585 RIN WALL KNESS) SEE CITY OF FREMONT STANDARD SPECIFICATIONS SECTION 32	SEE CITY OF FREMONT STANDARD SPECIFICATIONS SECTION 32		WITH MIN 1/4" WALL THICKNESS)	PFAFF AND KENDALL	843572/SBH-2 OR RTAM35AA26
ALUM	Single 6' Arms	SEE CITY OF FREMONT STANDARD SPECIFICAT	HAPCO 21-585 (0.188 MIN WALL THICKNESS) SEE CITY OF FREMONT STANDARD SPECIFICAT	SEE CITY OF FREMONT STANDARD SPECIFICAT	HAPCO 21-865 (SPECIAL ORDER	WITH MIN 1/4" WALL THICKNESS)		
			30 FT		35 FT	•		

			CIT		FREMORD DETAILS		DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED	DATE			ROLIER BLE		Nam Hughen	
	REVISIONS	·					CITY ENGINEER	
FILE NO.	_	SCALE		DRAWN CHECKED DATE			DWG NO.	
SD-	24-06.DWG	NONE		WPM	KC	03/14/06	SD-24	3 of 7

### **ELECTROLIER NOTES**

- 1. ALL UNDERGROUND WIRING SHALL BE IN APPROVED CONDUIT. THE UNDERGROUND CONDUIT AND ALL METAL PARTS SHALL BE CONTINUOUSLY BONDED AND GROUNDED.
- 2. MINIMUM CONDUIT SHALL BE TYPE II, PVC OR ABS UL LISTED SUITABLE FOR DIRECT BURIAL. MINIMUM CONDUIT SIZE SHALL BE 1" BETWEEN THE POLE AND THE PULL BOX FOR AWG NO. 8 AND 1 ½" MIN. FOR AWG NO. 6 AND LARGER, ALL CONDUIT ENDS SHALL BE PLUGGED WITH DUCT SEALING COMPOUND.
- 3. MINIMUM RADIUS OF BENDS SHALL BE 18 INCHES. ALL BENDS AND/OR OFFSETS SHALL BE ACCOMPLISHED WITH FACTORY FORMED SECTIONS.
- 4. ALL PLASTIC CONDUIT STUBS INTO BASE SHALL BE COMPLETED BY A 90° RIGID METALLIC OR PLASTIC CONDUIT ELL, AND EXTENSION AS REQUIRED.
- 5. PULL BOXES SHALL BE CHRISTY N-9 (OR APPROVED EQUAL). COVERS SHALL HAVE CAST BRASS HOLD-DOWN LUGS, AND SHALL BE INSCRIBED "STREET LIGHTING." A PULL BOX SHALL BE INSTALLED AT EACH ELECTROLIER.
- 6. PULL BOXES SHALL BE NOT MORE THAN 250 FEET APART ON LONG RUNS.
- 7. WHERE PULL BOXES ARE SUBJECT TO TRAFFIC LOADS, THEY SHALL BE SET ON A CONCRETE FOOTING AND THE COVER SHALL BE CAST IRON OR STEEL OF SUFFICIENT STRENGTH TO WITHSTAND THE TRAFFIC LOAD. (H20 LOADING)
- 8. RISERS INSTALLED ON UTILITY-OWNED POLES SHALL CONFORM TO SPECIFICATIONS SUPPLIED BY THE UTILITY COMPANY. ELECTRIC SERVICE POINT SHALL BE APPROVED BY PACIFIC GAS & ELECTRIC COMPANY.
- 9. CONDUCTOR SHALL BE UL LISTED AWG NO. 8 OR LARGER WITH 7 STRAND SOFT COPPER TYPE THW, THHN, XHHW, OR RHW WITH A MINIMUM OF 3/64 OF AN INCH INSULATION. HOWEVER, WIRES IN THE POLE SHALL BE MINIMUM #14.
- 10. NO MECHANICAL MEANS SHALL USED TO PULL WIRES SMALLER THAN NO. 1 AWG.
- 11. ALL SPLICES FOR GREATER THAN AWG NO. 10 SHALL BE IN PULL BOXES AND HAVE APPROVED SOLDERLESS CONNECTORS OF PROPER SIZE.
- 12. A FIBERGLASS OR POLYPROPYLENE PULL ROPE SHALL BE LEFT IN ALL EMPTY CONDUITS.
- 13. CONTRACTOR TO MEET PG&E REQUIREMENTS FOR CONDUIT AND CONDUCTORS BETWEEN THE PG&E AND CITY PULL BOXES.
- 14. FUSES SHALL BE LOCATED IN THE PULL BOX ADJACENT TO EACH ELECTROLIER. CONTRACTOR SHALL PROVIDE ADDITIONAL PULL BOX, PG&E SERVICE BOX, AND FUSE HOLDERS AND FUSES. IF PG&E SECONDARY BOX IS WITHIN 6' OF THE ELECTROLIER, THE ADDITIONAL PULL BOX IS NOT NEEDED.
- 15. ALL CONDUIT ENDS SHALL BE DUCT SEALED.
- 16. POLE NUMBERS SHALL BE PLACED ON ALL ELECTROLIERS. LOCATION AND SIZE OF NUMBERS TO BE AS SPECIFIED IN SECTION 32 "STREET LIGHTING SYSTEM," PAGE 26 OF THE CITY OF FREMONT STANDARD SPECIFICATIONS
- 17. EACH PULL BOX SHALL BE SET ON 6" MIN. OF CLEAN DRAIN ROCK.
- 18. PULL BOXES SHALL BE PLACED AT ALL ANGLE POINTS IN CONDUIT RUNS.
- 19. ALL STREET CROSSINGS SHALL BE 90° TO THE CENTERLINE.
- 20. STREET LIGHT DESIGN FOR MORE THAN 4 LIGHTS SHALL BE STAMPED, SIGNED AND DATED BY A ELECTRICAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA.
- 21. BOLT EXTENDERS MAY ONLY BE USED TO RAISE AN EXISTING, UNDAMAGED POLE AND BASE TO GRADE. STRUCTURAL CALCULATIONS AND/OR CERTIFICATION FROM THE MANUFACTURER IS NEEDED FOR THE PROPOSED BOLT EXTENDER.

			CIT	Y OF	FREMORD DETAILS		DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED	DATE	<u> </u>	ELECTROI		_	Nam Hughen	
	REVISIONS	6					CITY ENGINEER	
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.	
SD-	-24-06.DWG	NONE		DC KC 03/08/06			SD-24	4 of 7



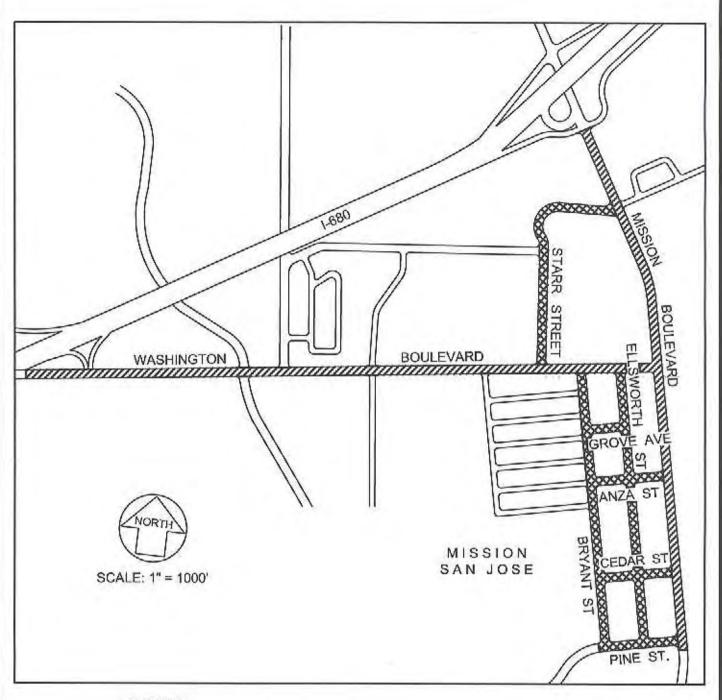
MOUNTING		ROLIER	LUMINAIRE
HEIGHT	SINGLE 6' ARM	DOUBLE 6' ARM	LOMINAIRE
28'-6"	UNION METALS DESIGN FB-MB #FB-7250-MB6 (OR APPROVED EQUAL) LA-7055-A*	UNION METALS DESIGN FB-MB #FB-7250-MMB6 (OR APPROVED EQUAL) LA-7055-AA	GENERAL ELECTRIC CAT. NO. M2AR 07SI N2AM S31 70 WATT 5800 LUMENS (OR APPROVED EQUAL)
32'-0"	UNION METALS DESIGN FB-MB #FB-7286-MB6 (OR APPROVED EQUAL) LA-7055-B*	UNION METALS DESIGN FB-MB #FB-7286-MMB6 (OR APPROVED EQUAL) LA-7055-BB*	GENERAL ELECTRIC CAT. NO. M2AR 10SI N2AM S31 100 WATTS 9500 LUMENS (OR APPROVED EQUAL)

REFER TO SHEET 4 FOR CONSTRUCTION NOTES.

REFER TO SHEET 7 FOR LIMITS OF INSTALLATION.

\*PUMCO DRAWING NUMBER

			CIT	CITY OF FREMONT STANDARD DETAILS				
NO.	REVISED REVISIONS	DATE		TROLIER BLE - MIS			Man Huy	plea
FILE NO. SCALE SD-24-06.DWG NONE			DRAWN WPM	CHECKED KC	03/14/06	DWG NO. SD-24	6 of 7	

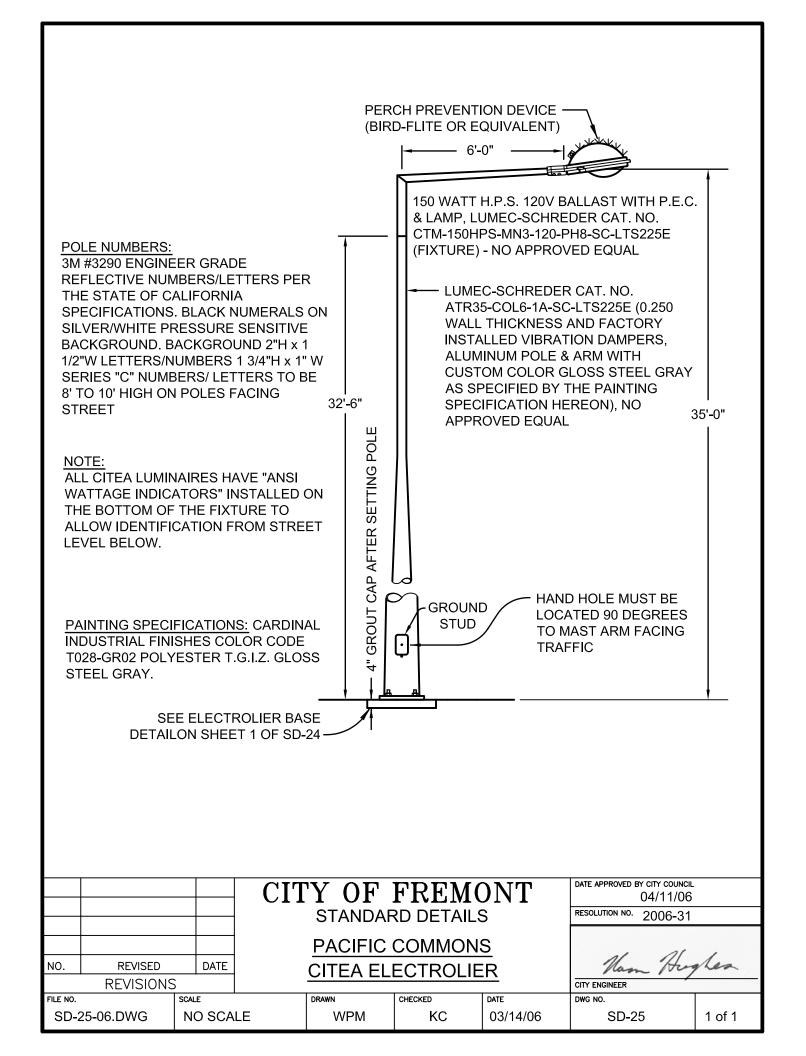


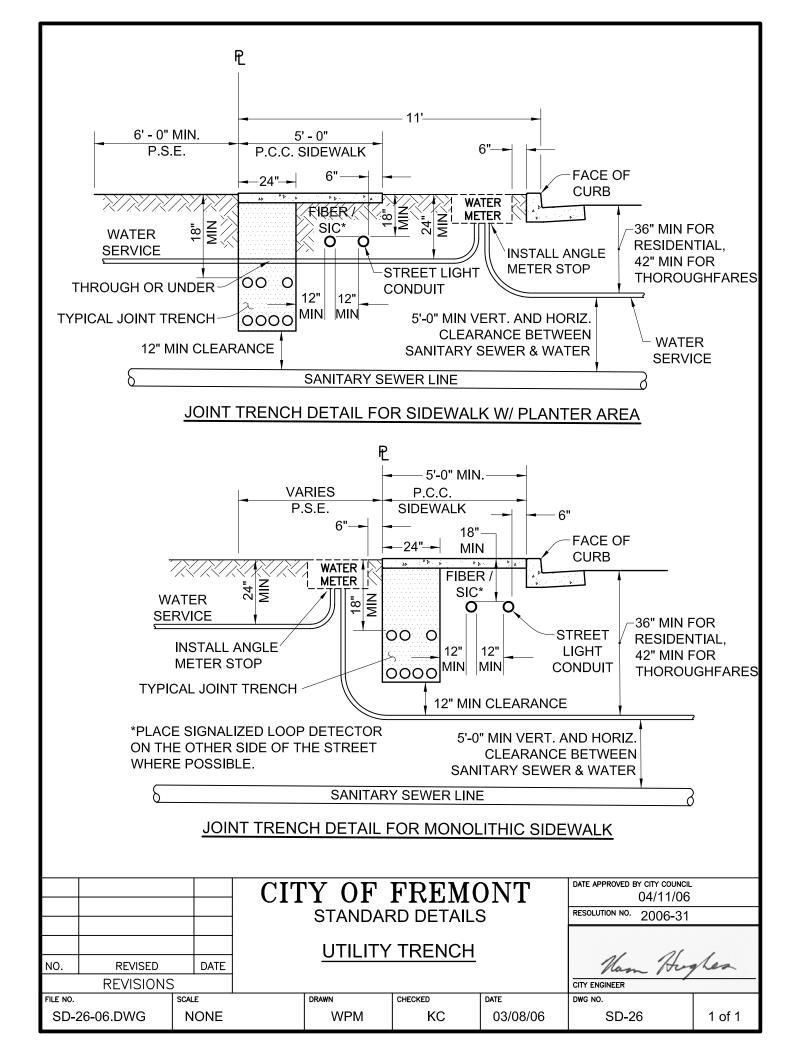
LEGEND

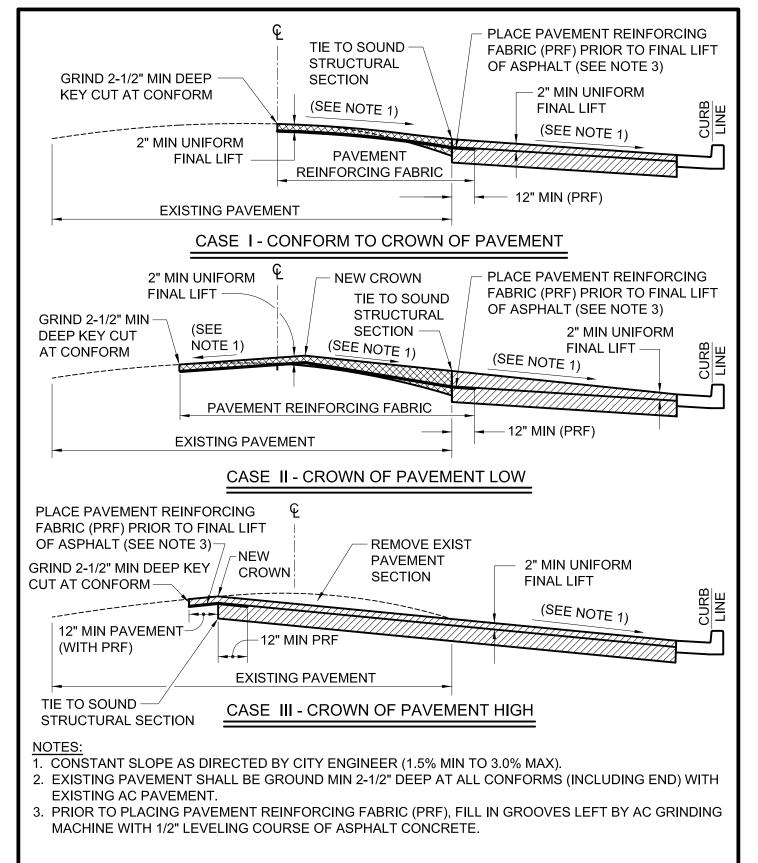
33 FT MOUNTING HEIGHT "MISSION BELL" ELECTROLIER

28 FT MOUNTING HEIGHT "MISSION BELL" ELECTROLIER

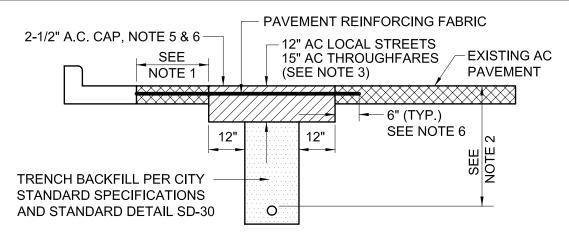
			CITY OF	FREM	7 7 7 3 7	DATE APPROVED BY CITY COL 04/11/ RESOLUTION NO. 2006-	06
NO.	REVISED	DATE	AND IN	ROLIER LIN ISTALLATI	ON	Nam 1	rogles
	REVISION	IS	MIS	SION BELL		CITY ENGINEER	/
FILE NO. SD-2	4-06.DWG	NONE	DRAWN WPM	CHECKED	12/16/05	DWC NO. SD-24	7 of 7



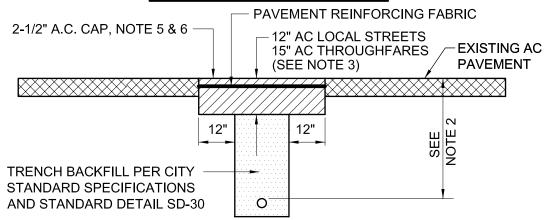




			CITY OF	FREM		DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED	DATE	TIE-IN I	PAVEMENT		Nam Hughen	
	REVISIONS	5				CITY ENGINEER	
FILE NO.		SCALE	DRAWN	CHECKED	DATE	DWG NO.	
SD-2	7-06.DWG	NONE	WPM	KC	12/16/05	SD-27	1 of 1



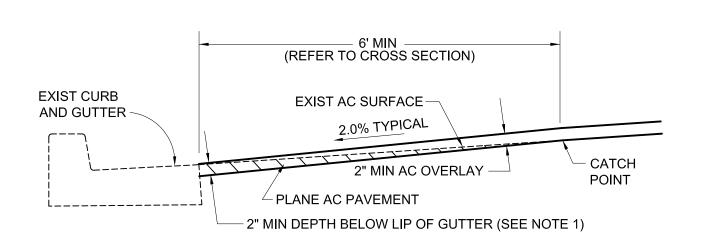
# LONGITUDINAL TRENCH ONLY



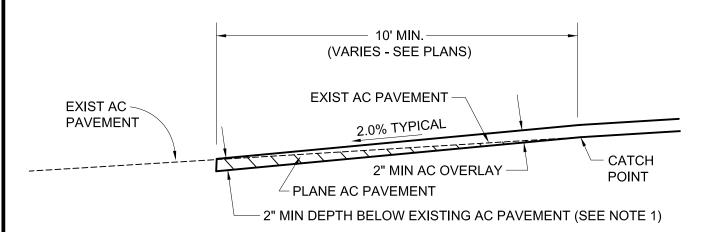
# LONGITUDINAL AND TRANSVERSE TRENCH

- 1. WHEN DISTANCE BETWEEN TRENCH AND LIP OF GUTTER IS 3' OR LESS, ASPHALT PAVING SHALL BE REPLACED TO LIP OF GUTTER.
- 2. MINIMUM COVER TO FINISHED GRADE SHALL BE 36" FOR LOCAL STREETS AND 42" FOR THOROUGHFARE STREETS.
- 3. IF STREET HAS BEEN OVERLAYED WITH FABRIC, SPECIAL MEASURES, AS DIRECTED BY THE CITY ENGINEER, SHALL BE TAKEN TO INSURE INTEGRITY OF FABRIC.
- 4. ALL ASPHALT PAVING JOINTS SHALL BE SEALED WITH RS-1 AND HOT FINES OR SAND FOR MOISTURE SEAL AND APPEARANCE.
- 5. GRIND EXISTING PAVEMENT TO A DEPTH OF 2-1/2" AND EXTEND A.C. OVERLAY AND REINFORCING FABRIC TO THE NEAREST CURB OR AS DESIGNATED BY THE CITY ENGINEER.
- 6. GRIND EXISTING PAVEMENT AND EXTEND A.C. OVERLAY 6" BEYOND DEEP LIFT A.C. BOTH SIDES OR AS DESIGNATED BY THE CITY ENGINEER.
- 7. PRIOR TO PLACING PAVEMENT REINFORCING FABRIC, FILL IN GROOVES LEFT BY AC GRINDING MACHINE WITH 1/2" LEVELING COURSE OF ASPHALT.

			CIT	CITY OF FREMONT				-
				STANDARD DETAILS				
			<u>L</u> :	ONGITUDI	1 11			
NO.	REVISED	DATE	-	TRANSVE	RSE TREN	ICH	Mann He	gles
	REVISIONS	;	-				CITY ENGINEER	
FILE NO.	E NO. SCALE			DRAWN	CHECKED	DATE	DWG NO.	
SD-	SD-28-06.DWG NONE			WPM	KC	03/08/06	SD-28	1 of 1



# PLANED PAVEMENT AT CURB AND GUTTER NO SCALE

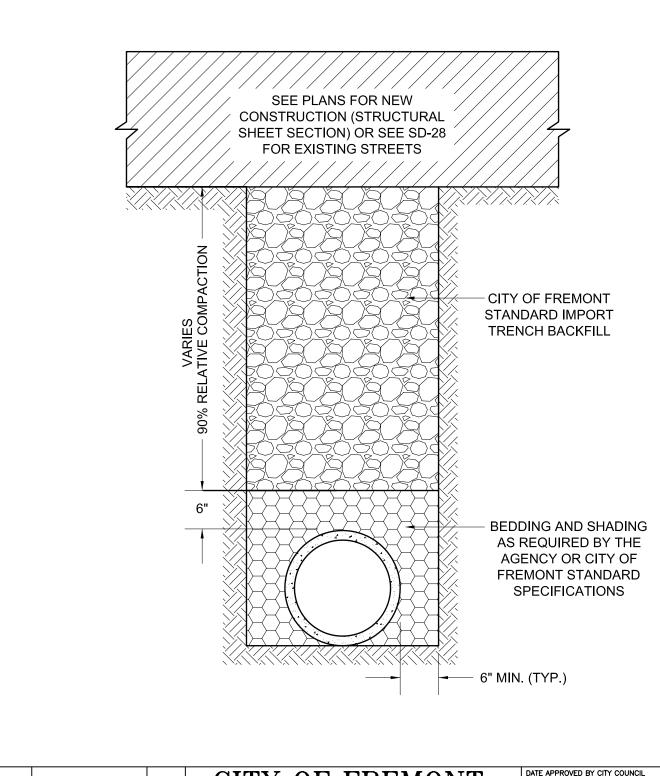


# PLANED PAVEMENT AT LONGITUDINAL & TRANSVERSE ROADWAY CONFORM NO SCALE

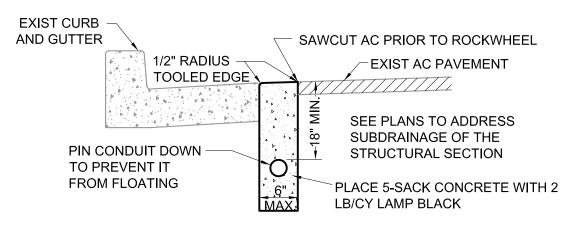
# NOTES:

- 1. IF USING PAVEMENT REINFORCING FABRIC, GRIND 2-1/2" MIN DEPTH BELOW LIP OF GUTTER OR BELOW EXISTING AC PAVEMENT.
- 2. PRIOR TO PLACING PAVEMENT REINFORCING FABRIC, FILL IN GROVES LEFT BY AC GRINDING MACHINE WITH 1/2" LEVELING COURSE OF ASPHALT.

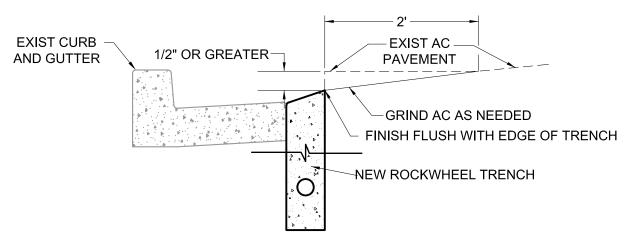
			CIT	Y OF	DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31				
NO.	REVISED	DATE		COLD	<u>PLANE</u>		Nam Hughen		
	REVISIONS	5					CITY ENGINEER		
FILE NO.			DRAWN	CHECKED	DATE	DWG NO.			
SD-	-29 <b>-</b> 06.DWG	Ξ	WPM	KC	03/14/06	SD-29	1 of 1		



			CIT	Y OF	FREM RD DETAIL	<b>-</b> - · -	DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
			<u>T</u>	RENCH B	21 21	,		
NO.	REVISED	DATE	COMF	PACTION F	REQUIRE	MENTS	Man Hay	ples
	REVISIONS	6			·		CITY ENGINEER	
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.	
SD-	SD-30-06.DWG NONE			WPM	KC	03/08/06	SD-30	1 of 1

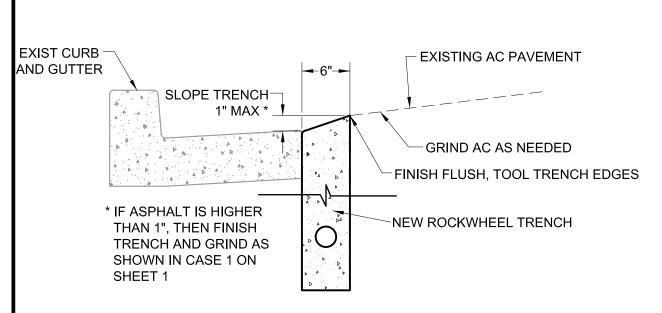


# **ROCKWHEEL TRENCH - CASE 1**

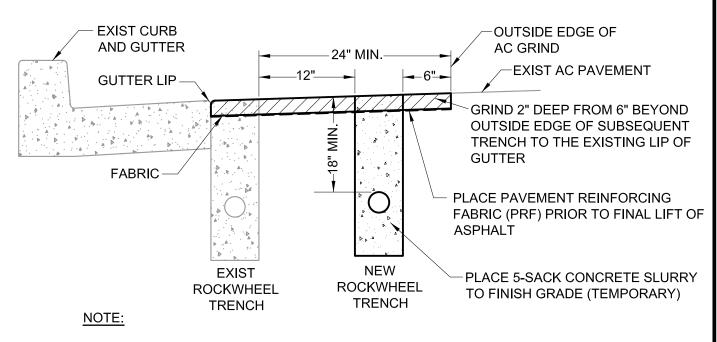


ROCKWHEEL TRENCH ADJACENT TO HIGH ASPHALT - CASE 2 (TRENCHES INSTALLED PRIOR TO 08/03/95)

			CIT	CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06 RESOLUTION NO. 2006-31	
NO.	REVISED REVISIONS	DATE	<u>F</u>	ROCKWHE	Man Hughen			
FILE NO.	11211010110	SCALE	I	DRAWN	CHECKED	DATE	DWG NO.	
SD-31-06.DWG NONE		≣	WPM	KC	03/09/06	SD-31	1 of 2	



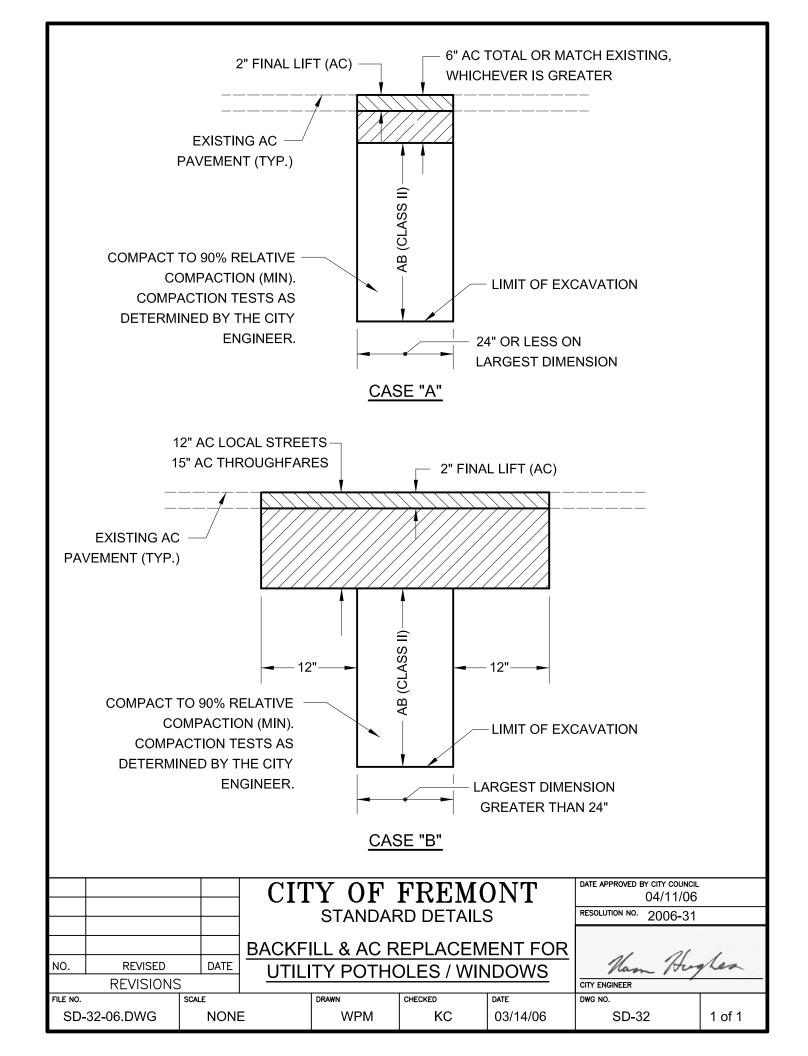
# ROCKWHEEL TRENCH ADJACENT TO HIGH ASPHALT CASE "A1"

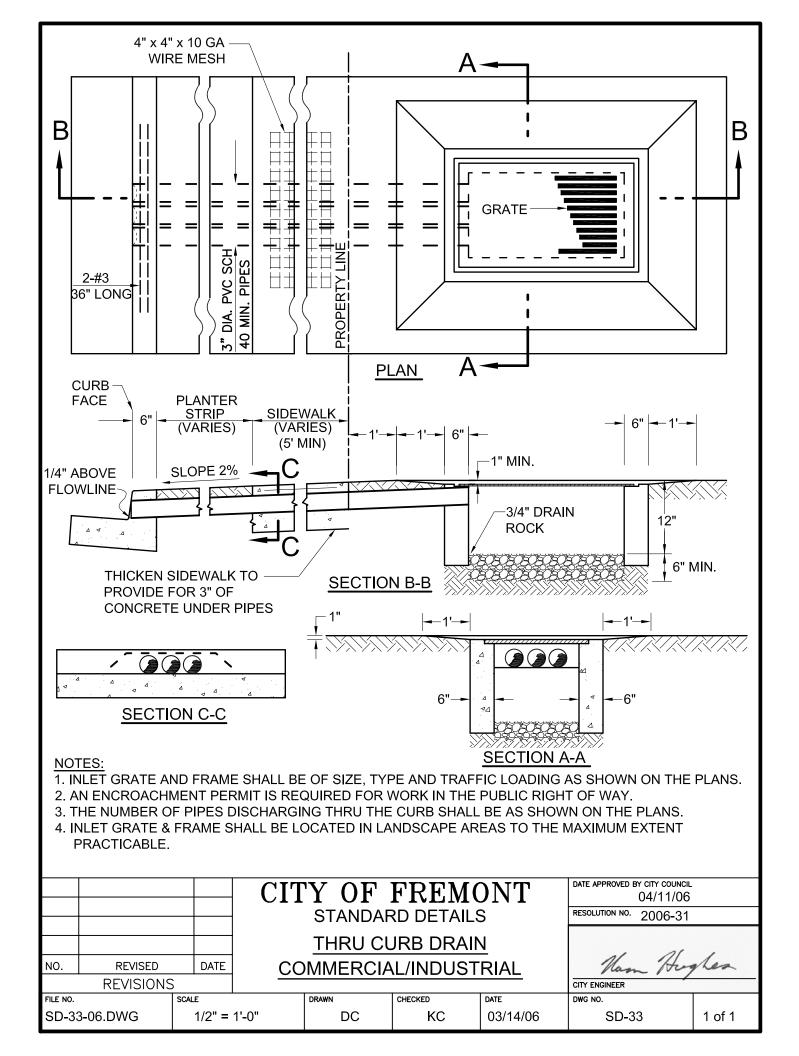


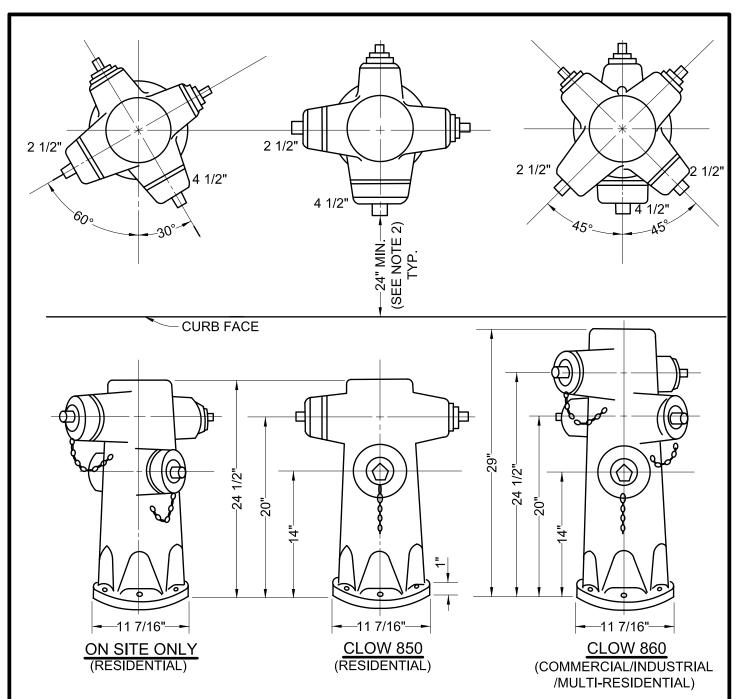
TRENCHES IN THIS CONFIGURATION GREATER THAN 4 FEET WIDE OR 200 FEET LONG WILL BE PAVED WITH A SPREADER BOX OR PAVING MACHINE

ROCKWHEEL TRENCH (NEW CONSTRUCTION)

			CIT	CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31		
				STANDAR	2000-31				
				<b>ROCKWH</b>	1 11				
NO.	REVISED	DATE					Man Highes		
	REVISIONS	5					CITY ENGINEER		
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.		
SD-	SD-X13.DWG NONE			WPM	KC	03/14/06	SD-31	2 of 2	

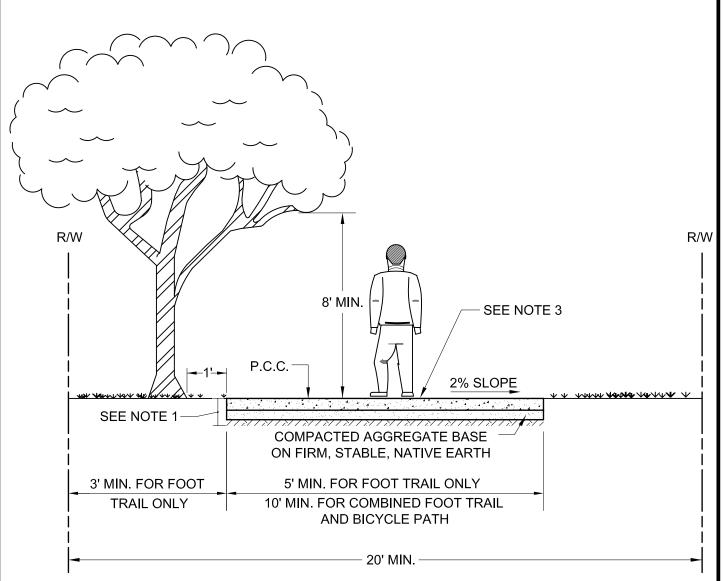






- NOTE 1. HYDRANTS SHALL BE THE EAST BAY CALIFORNIA FIRE HYDRANT MANUFACTURED UNDER LICENSE WITH THE EAST BAY MUNICIPAL UTILITY DISTRICT AS MANUFACTURED BY CLOW OR APPROVED EQUAL.
  - 2. THE STEM PLUG CLOSEST TO THE CURB SHALL BE 24" MIN. FROM THE CURB FACE. FOR MONOLITHIC SIDEWALKS, 36" MIN. WIDE CLEARANCE IS REQUIRED FOR ACCESSIBILITY.
  - 3. HYDRANTS SHALL BE PAINTED KEL-GUARD ENAMEL SAFETY YELLOW NO. 1700-63 MANUFACTURED BY KELLY-MOORE PAINT CO. OR APPROVED EQUAL.
  - 4. SET HYDRANT TO GRADE SUCH THAT LOWEST STEM PLUG IS 18" MIN. ABOVE SIDEWALK OR 20" MIN. ABOVE FINISH GROUND IN PLANTER AREAS.

			<b></b>	CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31		
NO.	REVISED	DATE	FIR	FIRE HYDRANT				Nam Hughen	
	REVISIONS	5					CITY ENGINEER		
FILE NO.		SCALE	DRAWN	CHEC	CKED	DATE	DWG NO.		
SD-3	SD-34-06.DWG NONE		DC	;	KC	03/09/06	SD-34	1 of 1	

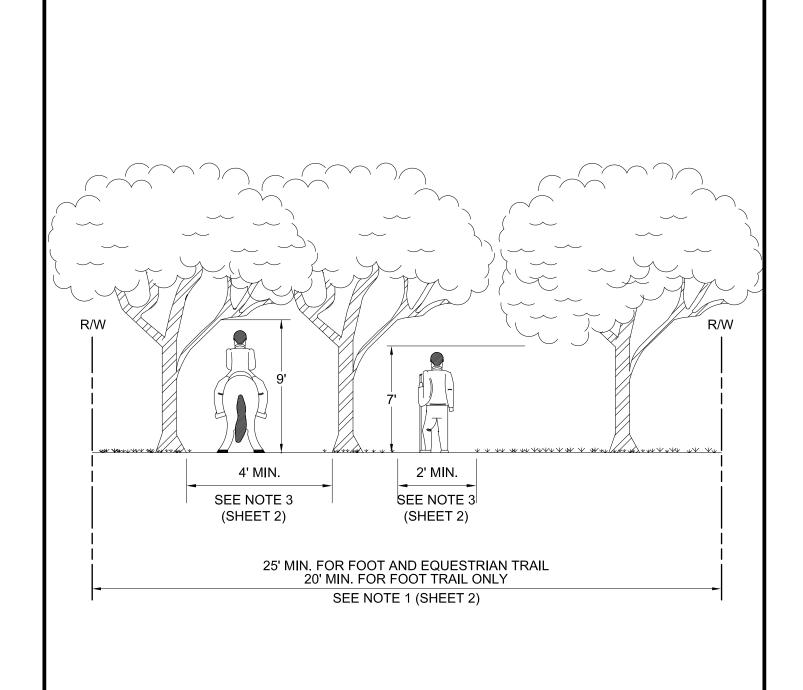


# COMBINED FOOT TRAIL & BICYCLE PATH

# NOTES:

- REFER TO CALTRANS CLASS I BIKE / PEDESTRAIN FACILITY FOR DESIGN CRITERIA.
- 2. A 20 FOOT RIGHT-OF-WAY IS TO BE CONSIDERED AN ABSOLUTE MINIMUM AND SHALL BE INCREASED WHERE POSSIBLE TO TAKE ADVANTAGE OF NATURAL FEATURES, TO PROVIDE REST AREAS AND HORIZONTAL RELIEF.
- 3. FOOT TRAIL OR BICYCLE PATH SHALL BE CLASS "A" 6 SACK MIX PORTLAND CEMENT CONCRETE, 3/4 INCH MAXIMUM AGGREGATE WITH WASHED SURFACE.
- 4. STANDARD CITY STREET TREES SHALL BE PROVIDED AT AN AVERAGE SPACING OF 25 FEET ON EACH SIDE OF THE FOOT TRAIL & BICYCLE PATH.

			CIT	CITY OF FREMONT [			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED REVISIONS	DATE	<u>C</u>	OMBINED AND BICY	FOOT TR		Man Huy	hea
FILE NO. SCALE		ONE	DC DC	CHECKED KC	DATE 03/14/06	DWG NO. SD-35	1 of 1	



# FOOT & EQUESTRIAN TRAIL

			CIT	CITY OF FREMONT [			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31		
NO.	REVISED	DATE	<u>F00</u>				Nam Hughen		
	REVISIONS	5					CITY ENGINEER		
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.		
SD-36-05.DWG NC		DNE	DC	KC	03/09/06	SD-36	1 of 2		

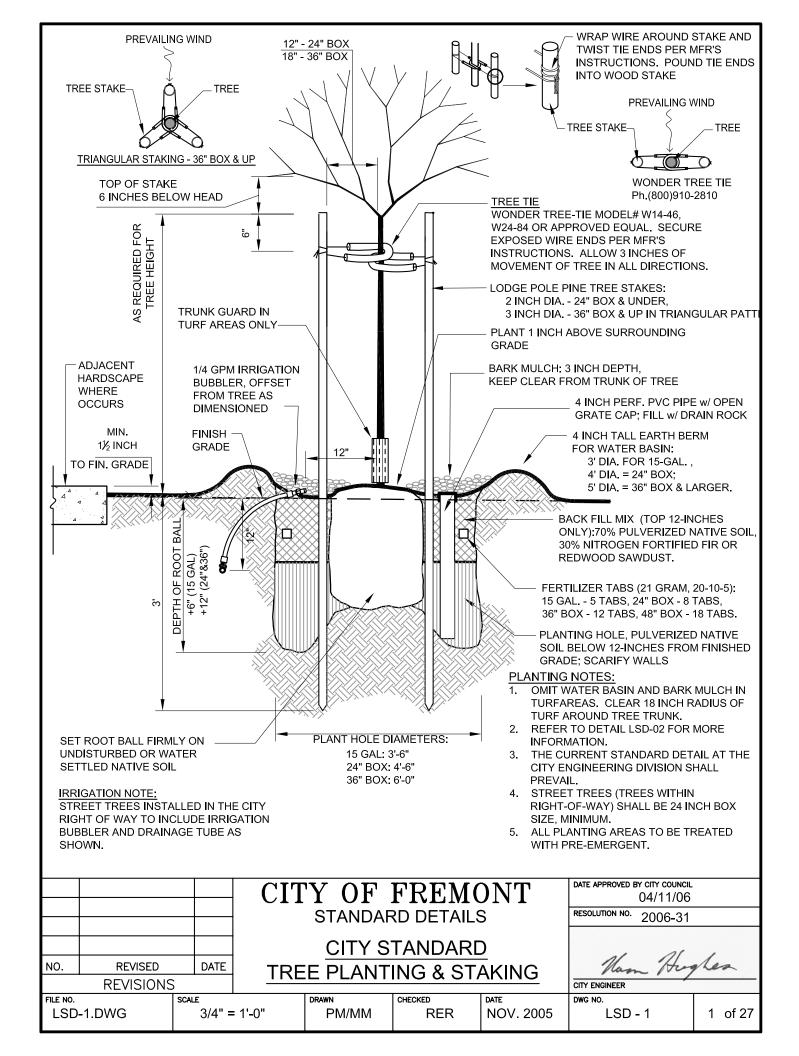
## NOTES:

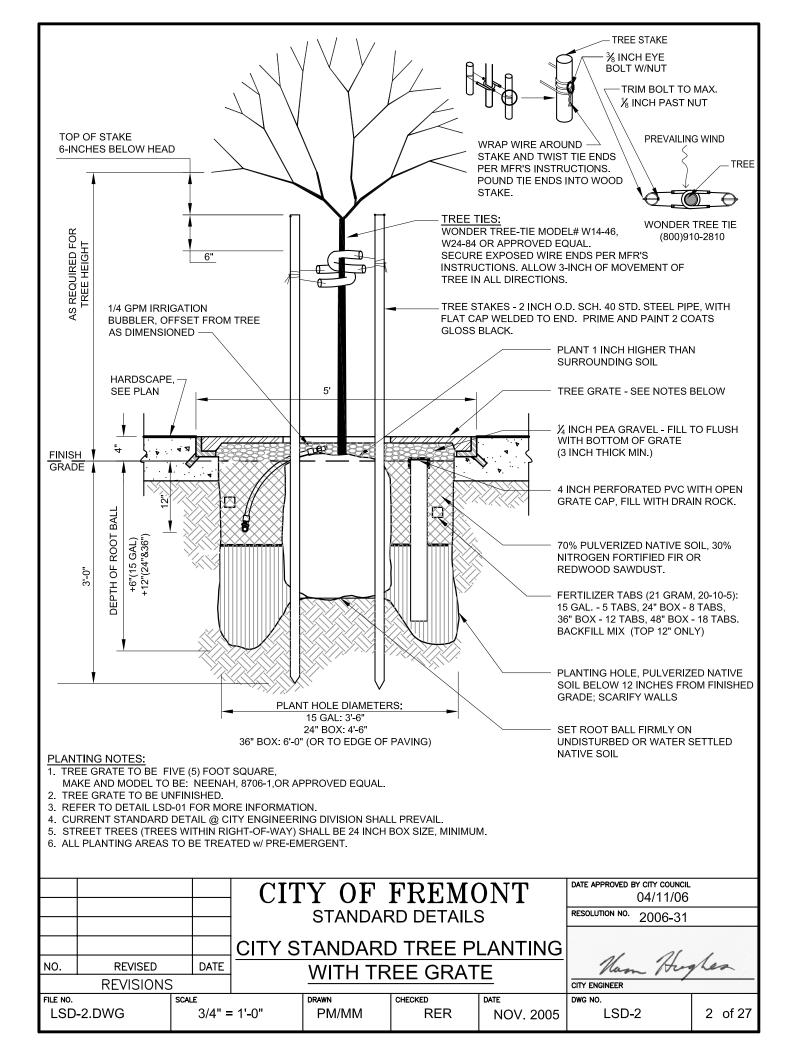
- 1. A 25 FOOT RIGHT-OF-WAY IS TO BE CONSIDERED AN ABSOLUTE MINIMUM FOR A FOOT AND EQUESTRIAN TRAIL AND A 20 FOOT RIGHT-OF-WAY IS TO BE CONSIDERED AN ABSOLUTE MINIMUM FOR A FOOT TRAIL ONLY AND SHALL BE INCREASED WHERE POSSIBLE TO TAKE ADVANTAGE OF NATURAL FEATURES, TO PROVIDE REST AREAS, AND TO ADD HORIZONTAL RELIEF.
- 2. EXCEPT FOR SPECIAL SITUATIONS WHERE A GREATER LONGITUDINAL GRADE RATE IS SPECIFICALLY APPROVED BY THE CITY ENGINEER, THE FOLLOWING MAXIMUM RATES OF GRADE SHALL APPLY:

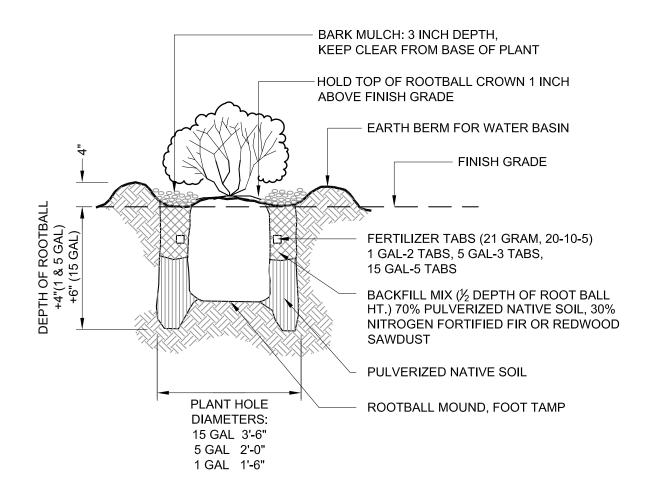
LENGTH OF GRADE	MAXIMUM GRADE RATE
500 FEET OR LONGER	7%
200 FEET TO 499 FEET	10%
LESS THAN 200 FEET	15%

- 3. THE MINIMUM TRAIL TREADS SHOWN ABOVE SHALL BE INCREASED TO 8 FEET WHERE THE TRAIL TREAD IS TO BE USED AS A FIRE ROAD OR MAINTENANCE ROAD.
- 4. ALIGNMENT OF TRAIL TREADS SHALL BE LOCATED TO CAUSE MINIMUM DISRUPTION TO EXISTING TERRAIN.
- 5. TRAIL TREADS SHALL BE SEPARATED WHERE POSSIBLE BUT A COMBINED TREAD OF 6 FEET MAY BE APPROVED BY THE CITY ENGINEER WHEN NATURAL FEATURES PRECLUDE THE SEPARATION OF THE TWO TREADS.
- 6. ONLY MINOR GRADING NECESSARY FOR SAFETY OR DRAINAGE PURPOSES SHALL BE APPROVED.
- 7. TRAIL TREADS SHALL BE CLEARED OF ALL ROCKS, STUMPS, AND ROOTS WHICH WOULD INTERFERE WITH THE SAFE PASSAGE OF TRAIL USERS.
- 8. TIMBER BRIDGES, DESIGNED TO BLEND WITH THE ENVIRONMENT, SHALL BE PROVIDED OVER WATER COURSES CROSSED BY THE TRAIL. BRIDGES SHALL BE DESIGNED TO CARRY VEHICLE LOADINGS WHEN THE TRAIL ALSO SERVES AS A FIRE TRAIL OR MAINTENANCE ROAD.
- 9. STILES OR SELF CLOSING GATES, WHICH CAN BE OPENED BY EITHER A MOUNTED EQUESTRIAN OR A PEDESTRIAN, SHALL BE PROVIDED AT ALL TRAIL CROSSINGS OF FENCE LINES.

			CIT	CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31		
NO.	REVISED	DATE	F00				Nam Hughen		
	REVISIONS						CITY ENGINEER		
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.		
SD-36-06.DWG NO		ONE	DC	KC	03/09/06	SD-36	2 of 2		



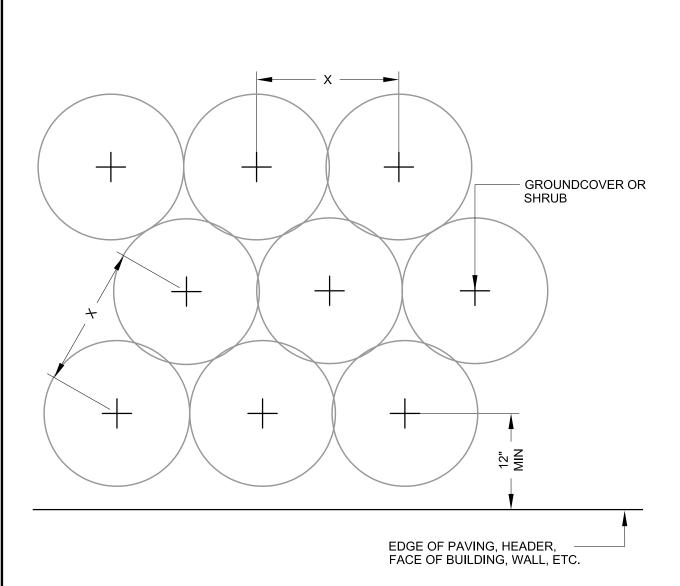




## NOTE:

- 1. CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.
- 2. ALL PLANTING AREAS TO BE TREATED WITH PRE-EMERGENT.

			CIT	CITY OF FREMONT				DATE APPROVED BY CITY COUNCIL 04/11/06		
				STANDARD DETAILS			RESOLUTION NO. 2006-31			
				CITY S						
			CLIE			. 11	,			
NO.	REVISED	DATE	<u> 201</u> 5	RUB AND	Man Huy	Les				
	REVISIONS		PLA	NTING		CITY ENGINEER				
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.			
LSD.	LSD-03.DWG 3/4" =		· 1'-0"	PM/MM/AK	RER	NOV. 2005	LSD-03	3 of 27		



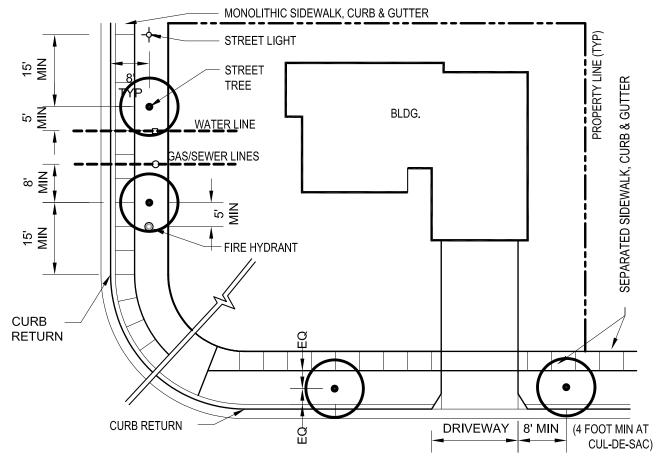
# NOTE:

- 1. 'X' IS GROUNDCOVER AND SHRUB SPACING AS PER LANDSCAPE PLAN, PLANT LIST, AND LEGEND.
- 2. KEEP MULCH CLEAR OF PLANT BASE (SEE LSD-03 & LSD-12)
- 3. CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.
- 4. ALL PLANTING AREAS TO BE TREATED WITH PRE-EMERGENT.

			CIT	Y OF	FREMO	ONT	DATE APPROVED BY CITY COUNCIL 04/11/06		
				STANDARD DETAILS			RESOLUTION NO. 2006-31		
				CITY ST					
<u> </u>	DE #655	DATE	SHR	UB AND C	ROUNDO	OVER	11 11	1	
NO.	REVISIONS	DATE	_	PLANTING LAYOUT			CITY ENGINEER		
FILE NO. LSD			'-0"	DRAWN PM/MM	CHECKED RER	NOV. 2005	DWG NO. LSD-4	4 of 27	

# MINIMUM STREET TREE CLEARANCES

- 1. STREET TREES SHALL BE LOCATED 8 FEET (MIN) FROM SANITARY SEWER, GAS, AND STORMWATER LINES
- 2. STREET TREES SHALL BE LOCATED 5 FEET (MIN) FROM WATER, TELEPHONE AND ELECTRICAL LINES.
- 3. STREET TREES SHALL BE LOCATED 5 FEET (MIN) FROM FIRE HYDRANTS.
- 4. STREET TREES SHALL BE LOCATED 15 FEET (MIN) FROM STREET LIGHTS.
- 5. STREET TREES SHALL BE LOCATED 8 FEET (MIN) FROM DRIVEWAYS AND 4 FEET (MIN) AT CUL-DE-SAC.
- 6. STREET TREES SHALL BE GENERALLY 35 FEET ON CENTER.
- 7. STREET TREES SHALL BE LOCATED 15 FEET (MIN) FROM CURB RETURNS.
- 8. MINIMUM ONE TREE PER LOT REQUIRED, AND TWO PER CORNER LOT.
- 9. IF LOT WIDTH EXCEEDS 60 FEET AT THE STREET, ONE TREE IS REQUIRED EVERY 35 FEET OF STREET, EXCLUDING LENGTH OF CURB RETURN.



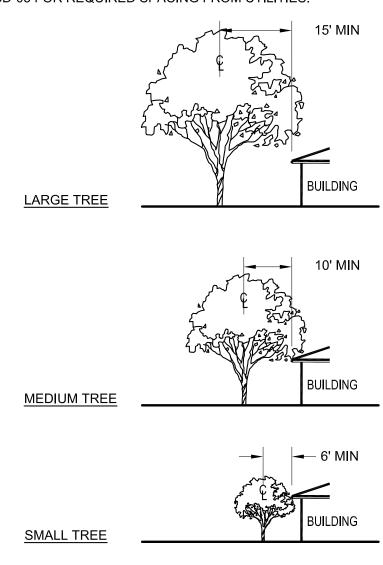
# NOTE: CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL

			СІТ	CITY OF FREMONT [			DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31	
NO.	REVISED REVISIONS	DATE	STR	CITY STANDARD STREET TREE CLEARANCES			Nam Hughen	
FILE NO.   SCALE   1" = 20'-		<u>'</u> 0'-0"	DRAWN PM/MM	CHECKED RER	NOV. 2005	DWG NO. LSD-5	5 of 27	

## MINIMUM TREE CLEARANCES FROM BUILDINGS

BRANCHES FROM MATURE TREES MAY NOT OVERHANG BUILDINGS AND ROOFS. ADEQUATE SPACE TO PLANT TREES ADJACENT TO BUILDINGS OR OTHER BUILT FEATURES MUST BE PROVIDED IN THE FOLLOWING MINIMUM WAYS:

- 1. SMALL TREES (TO 15 FEET TALL AT MATURITY) NO CLOSER THAN 6 FEET FROM BUILDING OR 2 FEET\* FROM PAVING, CURBS, OR WALLS WITH A MINIMUM PLANTING AREA 5 FEET WIDE.
- 2. MEDIUM TREES (TO 35 FEET TALL AT MATURITY) NO CLOSER THAN 10 FEET FROM BUILDING OR 3 FEET\* FROM PAVING, CURBS, OR WALLS WITH A MINIMUM PLANTING AREA 6 FEET WIDE.
- 3. LARGE TREES (ABOVE 35 FEET TALL AT MATURITY) NO CLOSER THAN 15 FEET FROM BUILDING ORE 3. FEET\* FROM PAVING, CURBS, OR WALLS WITH A MINIMUM PLANTING AREA 6 FEET WIDE, PREFERABLY 8 FEET WIDE.
- 4. WHEN ROOF EAVES OR BUILDING PROJECTIONS EXTEND BEYOND FACE OF BUILDING, CLEARANCE SHALL BE MEASURED FROM EDGE OF PROJECTION TO CENTERLINE OF TREE.
- 5. UPPER STORY OVERHANGS AND BUILDING FEATURES MAY NOT EXTEND WITHIN MINIMUM CLEARANCE EXCEPT FOR MINOR ROOF EAVES.
- REFER TO CITY STANDARD DETAIL LSD-05 FOR REQUIRED SPACING FROM UTILITIES.



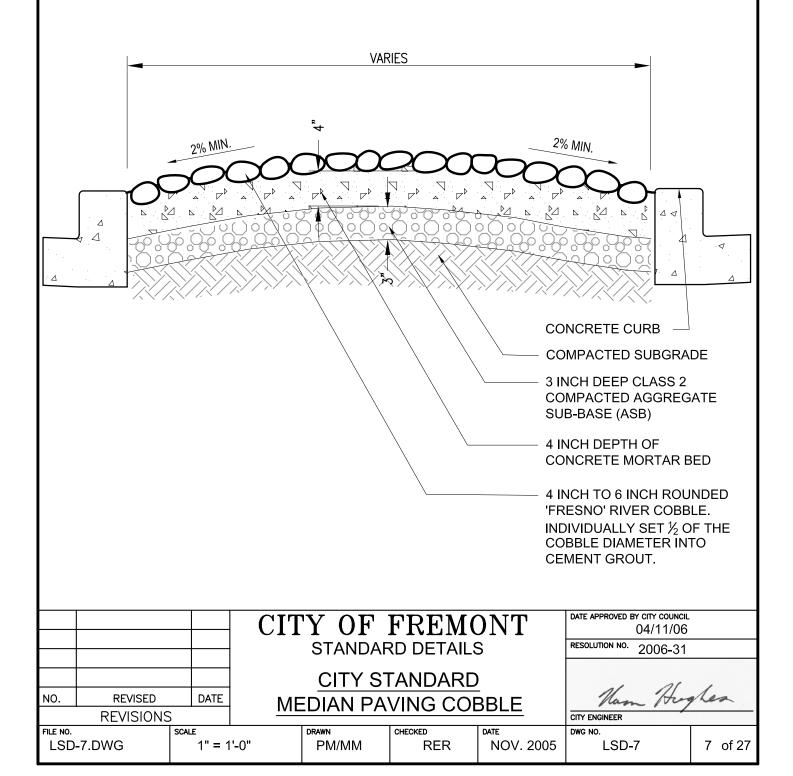
04/11/06

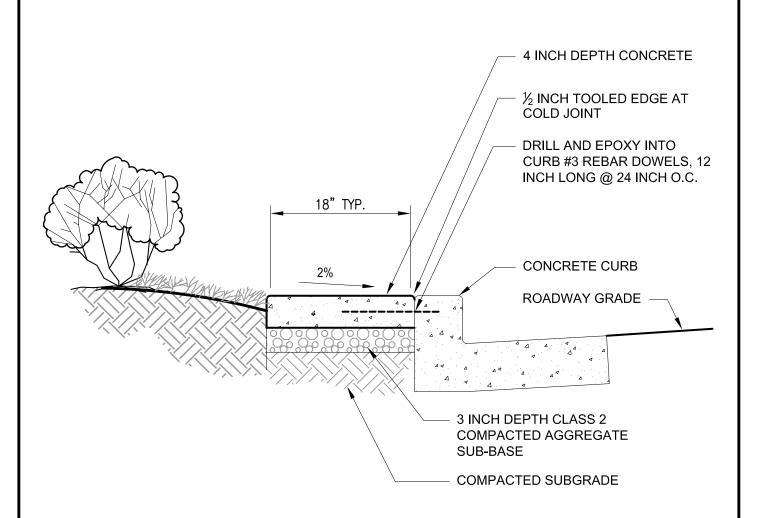
2006-31

6 of 27



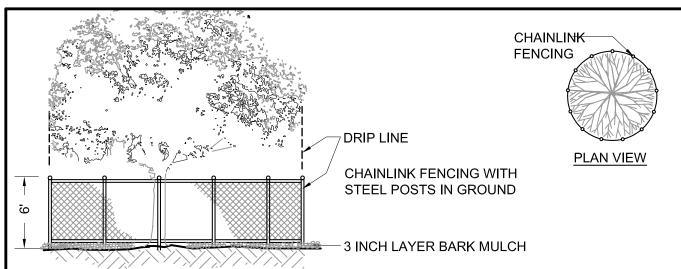
- CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.
- 2. CROWN TO BE ROUNDED WITH NO SHARP GRADE BREAKS.
- 3. MINIMIZE VISIBLE EXPOSED GROUT AT COBBLE JOINTS.
- 4. SURFACE OF COBBLE FIELD TO BE SMOOTH AND FLAT TO GRADE WITHOUT VARIATION IN HEIGHT OF INDIVIDUAL COBBLES.
- 5. COBBLES WITH BREAKS OR FRACTURES ARE NOT ALLOWED.
- 6. ROCK SHALL BE 'SATURATED SURFACE MOIST' (SSM) PRIOR TO PLACEMENT.
- 7. CONCRETE MORTAR BED SHALL HAVE A CEMENT RATIO PER CUBIC YARD OF CONCRETE OF NOT LESS THAN 564 POUNDS; SLUMP MAX. OF 3"; AGGREGATE SIZE ½" MAXIMUM.
- 8. INTEGRAL COLOR ADMIXTURE: CHROMIX, ADOBE TAN, #C-21 BY L.M. SCOFIELD.





- 1. CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.
- 2. ON MEDIANS LESS THAN 14 FEET WIDE, REPLACE MAINTENANCE BAND WITH 18 INCH MINIMUM WIDTH PLANTING OF WALKABLE GROUNDCOVER.
- 3. INSTALL 'DEEP JOINTS' TO MATCH CURB & GUTTER DEEP JOINTS. SEE ENGINEERING STANDARD DETAIL 8 FOR DEFINITION OF 'DEEP JOINT.'

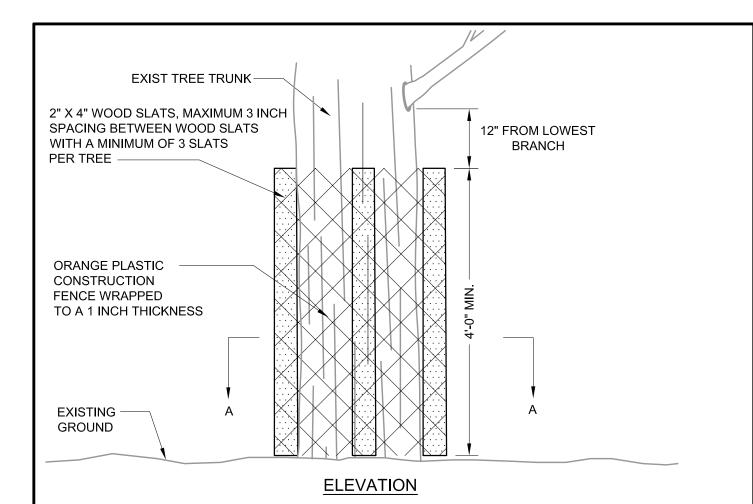
			CIT	Y OF	ONT	DATE APPROVED BY CITY COUNCIL 04/11/06		
				STANDAF	RD DETAILS	3	RESOLUTION NO. 2006-31	
NO.	REVISED	DATE	ſ	CITY S	TANDARE	_	Nam Hoy	Nes
l	REVISIONS	5	-			<del></del>	CITY ENGINEER	
FILE NO. LSD	-8.DWG	1" = 1	'-0"	PM/MM	CHECKED RER	NOV. 2005	DWG NO. LSD-8	8 of 27

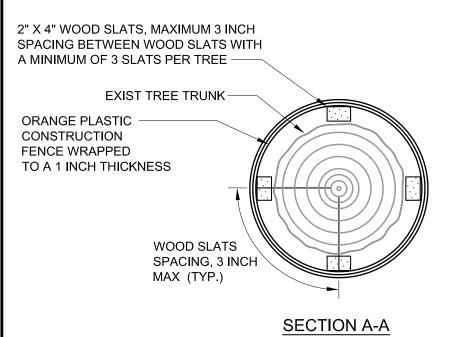


### TREE PRESERVÁTION NOTES

- CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.
- 2. TREE PRESERVATION MEASURES MUST BE IN PLACE BEFORE CONSTRUCTION, DEMOLITION AND/OR GRADING ACTIVITIES COMMENCE. CITY OF FREMONT WILL STOP CONSTRUCTION IF TREE PRESERVATION MEASURES ARE NOT IN PLACE AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- 3. TREES CALLED OUT FOR PRESERVATION SHALL BE FENCED AT THE DRIPLINE. FENCING MAY OCCUR AT THE COMBINED DRIPLINES OF GROVES OF TREES. PLACE 3 INCH BARK MULCH BENEATH DRIPLINES OF TREES TO BE PRESERVED.
- 4. FENCING SHALL BE 6 FEET TALL CHAIN LINK FENCING WITH STEEL POSTS EMBEDDED IN THE GROUND.
- 5. NO GRADING SHALL OCCUR WITHIN THE DRIPLINES/FENCED AREA OF EXISTING TREES.
- 6. NO CONSTRUCTION MATERIALS OR CONSTRUCTION VEHICLES MAY BE STORED WITHIN THE DRIPLINES/FENCED AREA OF EXISTING TREES.
- 7. CONSTRUCTION VEHICLES OR MACHINERY MAY NOT PASS BETWEEN TWO OR MORE EXISTING TREES IDENTIFIED FOR PRESERVATION IF THEIR CANOPIES ARE WITHIN 10 FEET OF TOUCHING. ADDITIONAL FENCING MAY BE REQUIRED BY THE CITY AS NEEDED.
- 8. THE CONTRACTOR IS REQUIRED TO HAVE AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), APPROVED BY THE CITY, ON SITE IF SITE CONSTRUCTION EFFORTS REQUIRE REMOVAL OF EXISTING ROOTS OR BRANCH PRUNING. ROOTS APPROVED FOR CUTTING MUST BE CUT CLEANLY WITH A SAW. RIPPING OR SHREADING ROOTS SUBJECT TO FINE/PENALTY.
- 9. UNAUTHORIZED TREE REMOVAL IS SUBJECT TO REPLACEMENT EQUAL TO THE APPRAISED VALUE OF THE TREE LOST PER FMC 4-5108.
- 10. THE CONTRACTOR IS REQUIRED TO WATER, FERTILIZE AND ATTEND TO OTHER MAINTENANCE NEEDS OF EXISTING TREES TO MAINTAIN HEALTHY GROWTH THROUGHOUT THE CONSTRUCTION PERIOD. AN EARTH BERM MEASURING MINIMUM 6 FEET IN DIAMETER, AND 6 INCHES IN HEIGHT SHALL BE CONSTRUCTED AT THE BASE OF EACH TREE TO FUNCTION AS A TEMPORARY WATERING BASIN DURING THE CONSTRUCTION PERIOD. TREES SHALL BE WATERED ACCORDING TO WEATHER AND TREE SPECIES REQUIREMENTS.
- 11. IF TREES ARE BEING RELOCATED: RELOCATION OF EXISTING TREES SHALL OCCUR UNDER THE OBSERVATION AND DIRECTION OF A CERTIFIED ARBORIST APPROVED BY THE CITY OF FREMONT.
- 12. TRUNK WRAP PROTECTION SHALL OCCUR FOR TREES SITUATED IN SMALL TREE WELLS OR SIDEWALK PLANTERS. THIS FORM OF PROTECTION WILL BE ALLOWED BY APPROVAL FROM SENIOR LANDSCAPE

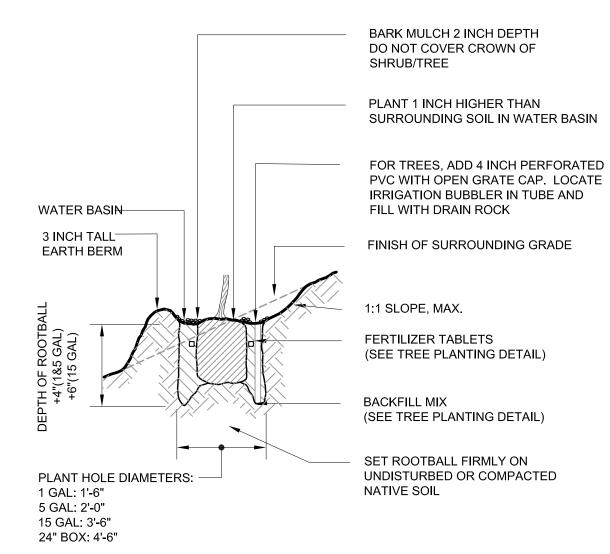
			CIT	Y OF			DATE APPROVED BY CITY COUNCIL 04/11/06	
				STANDAF	RD DETAILS	3	RESOLUTION NO. 2006-31	
				CITY S	TANDARI	)	11 01	,
NO.	REVISED	DATE	TRF	E PROTE	CTION FE	NCING	Man Huy	Nes
	REVISIONS	S		_		1101110	CITY ENGINEER	
FILE NO. LSD	-9.DWG	1/8" =	= 1'-0"	DRAWN PM/MM	CHECKED RER	NOV. 2005	DWG NO. LSD-9	9 of 27





- 1. WRAP ORANGE PLASTIC
  CONSTRUCTION FENCE ON TOP OF
  WOOD SLATS WITH AN OVERLAP OF
  12 INCHES AND TIE WITH WIRE.
  SEE SECTION BELOW.
- 2. TEMPORARY TRUNK WRAP PROTECTION WILL BE ALLOWED ONLY BY APPROVAL FROM THE SENIOR LANDSCAPE ARCHITECT
- DAMAGE TO BRANCHES & ROOTS SUBJECT TO FINE UP TO APPRAISED VALUE OF THE TREE, PER CITY TREE PRESERVATION ORDINANCE (FMC 4-5100).
- 4. REFER TO LSD-9 FOR ADDITIONAL TREE PRESERVATION REQUIREMENTS APPLICABLE TO THIS DETAIL.

			CITY O	F FREM	ONT	DATE APPROVED BY CITY COULD	
			STAN	IDARD DETAI	LS	RESOLUTION NO. 2006-	31
			CITY	' STANDARI	<u> </u>		
NO.	REVISED	DATE		RY TRUNK	WRAP	Nam H	eghes
	REVISIONS	;	<u>PR</u>	OTECTION		CITY ENGINEER	
FILE NO. LSD-	FILE NO. SCALE 3/4"=1		'-0" DRAWN MM	CHECKED RER	DEC 2005	DWG NO. LSD-10	10 of 27

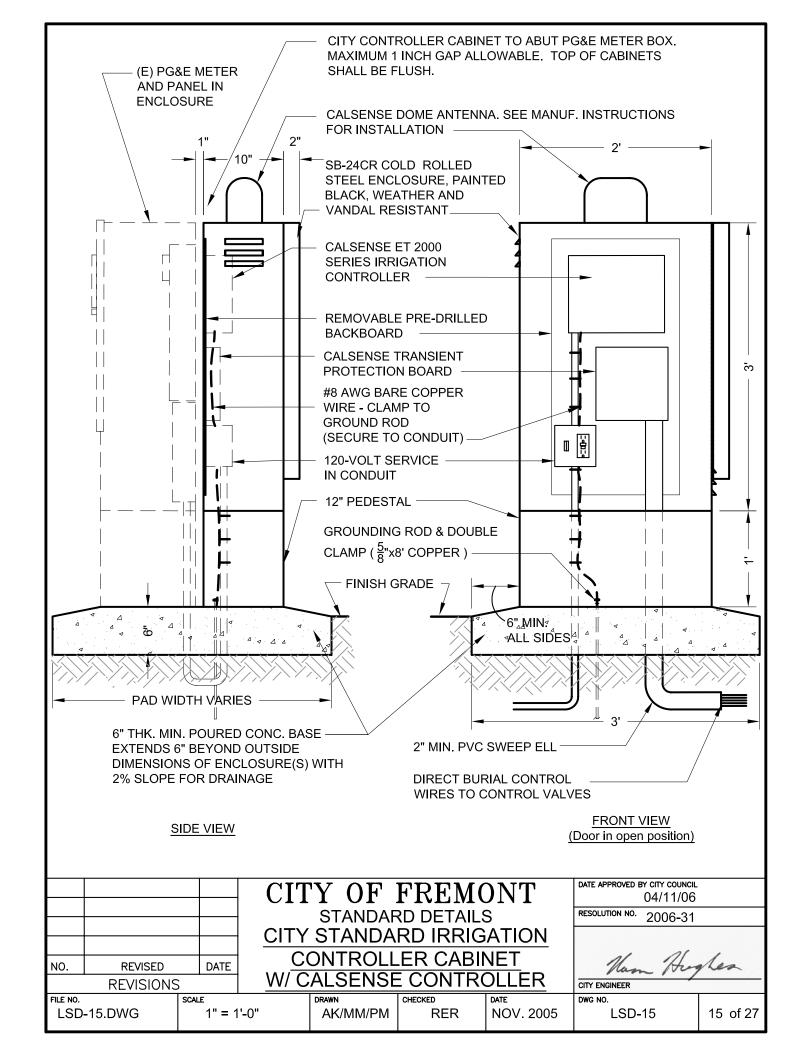


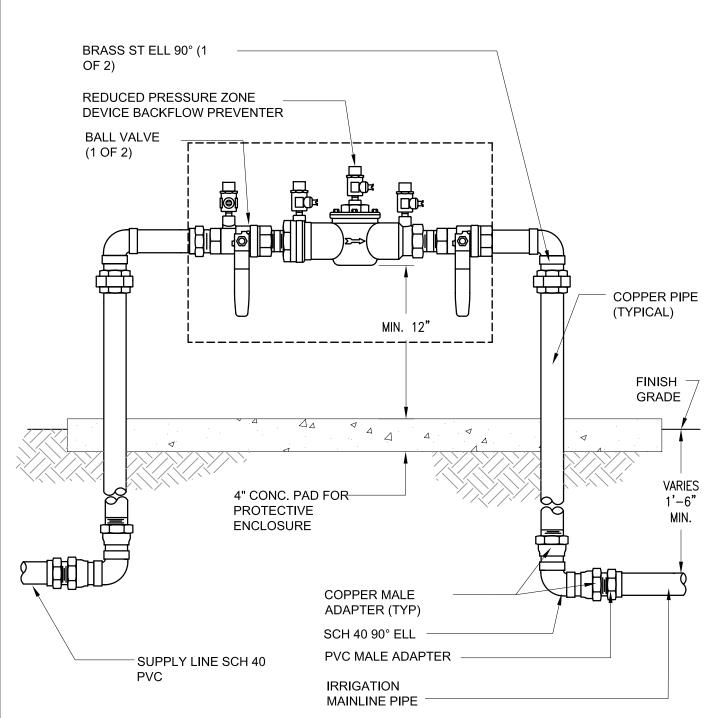
- 1. OMIT WATER BASIN AND BARK MULCH IN TURF AREAS. CLEAR 18 INCH RADIUS OF TURF AROUND TREE TRUNK.
- 2. THE CURRENT STANDARD DETAIL AT THE CITY ENGINEERING DIVISION SHALL PREVAIL.
- 3. SEE TREE PLANTING DETAIL FOR STAKING INFO.
- 4. THIS DETAIL TO BE REFERENCED, PER CITY STANDARD DETAIL LSD-11, FOR TREE PLANTING IN A VEGETATED BIOSWALE.

			CIT	Y OF			DATE APPROVED BY CITY COUNCIL 04/11/06	
				STANDAF	RD DETAILS	3	RESOLUTION NO. 2006-31	
NO.	REVISED	DATE		Y STAND			Nam Hay	des
110.	REVISIONS		SHR	UB PLAN	IING ATS	SLOPE	CITY ENGINEER	
FILE NO.	-12.DWG	SCALE 1/4" =	= 1'-0"	DRAWN AK/MM/PM	CHECKED RER	NOV. 2005	DWG NO. LSD-12	12 of 27

The state of the		COMMENTS			Use Only in Poor Soils Wind Free Areas Only	Natural growth habit: multi-stemmed tree Lifter from Seeds	Plant in grove formation Slow/Moderate Grounds	Use Only in Poor Soils Drought tolerant once established	Sensitive to Boron/Sodium Oreas spring color	Subject to root rot in poor drained soil Accent Tree	Accent Tree Large Areas Only	Good in Groups Windy Areas	Good in Poor Soils/Wind Autum pump is soodbase numb (all color	( Areas	Very Clean Good Soik/Light Winds	Resistant to Oak Root Fungus Accent Only	Good Screen For use in Street lawn container estatlier	ti-Trunk Bark	Grad Street Tree	Pendulous braches; open growth habit Stake Carefully	Multi-Trunk/Fruitless Slow Starter		Good Street, Park Tree Mildew-Resistant/Big Leaf	Good Fall Coler/Flowering Good Vertical Street Tree	Good Vertical Street Tree Shade/street tree with ample space	Holds Dead Leaves Slow(Deen Rooted	Mightiest Oak - good for park setting Rio Park/Arnhid Problems	Can Be Multi-Trunk	Use in Peor Soils Multiple varieties; good in park setting Good Fall Coler Shades, Lawn Tree Small Street Tree/Multi Trank					
AMADUS   1   1   1   1   1   1   1   1   1		ANTING PACE REQ'S			•						•	·   · ·   ·				_	•		•	•			$\rightarrow$	-		· · ·								
PAL-POINT   PAL-		PL <sub>P</sub>			•	<b>.</b>	<u> </u>	<b>.</b>	ŀ.	H	4.				.   .	٠		·	<u> </u>			·	<u>: -</u>					Н						
		پ ا	ă N	Tender	•	ŀ	Ĭ.		·	Ŀ	·	Ì		Ť.	: [:	• •	ŀ	Ė	Ĺ	·	Ï		1				٠.	i						
STORMER   STOR		ENTA	DROU							1.1.	•			•	•								•	-				1.1						
STATE   STAT		NAM	ROST			٠.	ŀ			•	•				Π	•		Ι.					Ŧ					П						
Part		NVIR	-		•	Ė	İ	•	İ	Ħ	•	+	•	i	İ	Ť	İ		·		•		:	_		Ï	Ė.	Ħ						
		""	.ios		•	-	-			$\vdash$	$\rightarrow$	<u>· </u>		+	+	+	<b>.</b>	-	•		:	•	· ·			$\vdash$		-						
Section   Sect				aganianG boot	٠		ŀ	ŀ	٠.	<u> </u>		1	ŀ	•	•		٠.						ļ					i						
March   Marc							H		$\vdash$	╁		+			+			H	Н		•		<u>·   ·</u>			-	-	H						
March   Marc			IN E		•		1	•		ŀ		•	•	•	1	• •			٠		#		Ŧ					$\Box$		(92				
AND COLUMN COL			$\vdash$	1/18/1	÷					$\vdash$	$\pm$	t		Η.	$\cdot \mid \cdot \mid$	+	•		•		+	•	$\pm$	• •	•	1		$\forall$	•	plar T				
AND COLUMN COL			DEBR		•		H			- -		•		•	+			H	$\mathbb{H}$	٠		•	+		•	ŀ		$\vdash$		) .dc				
AND COLUMN COL			W ER			١.			•	$ \cdot $	٠.	• •		1	• •		•	٠.			• •		$\cdot \mid \cdot$		•		_	-	1.	ulus sp				
AND CASE   Section   AND CAS						ŀ	Ц	Ш		<u> </u>	٠	┸		٠	$\perp$	• •		Ш	٠		_	Ш	$\perp$		•	Ц		Ц	• • • •	dod :(				
AND COLUMN COL			FALL		•			•	Η.	<b>.</b> .	• •	+	١.		1.	•	• •	1		• •	•	•	+					∺	• • • • •	t Gum				
AND CASE   Section   AND CAS				Filtered		·	•	٠	٠.	1.	•	•		Ħ	$\top$	•		<u> </u>	·	٠	·		$^{\dagger}$	I			٠	ᆟ	• • •	(Swee				
AND COLUMN COL					•	ŀ	╁	+-	-	₩	+	+		+	+	+	+	<del> </del>	Н	•			╬	++	• •	<u> </u>	<del>    •</del>	╁	• • • •	teillua				
AND CASE   Section   AND CAS		IICS	EAFSI		•	ŀ	П			٠٠	٠	• •		•	•	•	•	Н	٠		1		1		•	•	•	П		r styra				
AND CASE   Section   AND CAS		ERIST	$\vdash$		Ť		1		١.	<del>    •</del>	÷	$^{+}$		$\forall$	$\pm$	+	Ť	H			$^{+}$		Ϊ			H	Ι.	H	-	dambe				
AND CASE   Section   AND CAS		RACT	NITO -				11.			١.	•	+	•		•			ļ.,			•		+			٠.	٠.	$\mathbb{H}$		f.iqui				
AND   PROPERTY   AND   PROPERTY   AND   PROPERTY   PR		СНАБ	- K		•		Ц	•		Ш	·		·					Ė		•			土					Ц		Tree);				
AND   PROPERTY   AND   PROPERTY   AND   PROPERTY   PR		REE	85  -		•	١.	Η.		١.	<del>                                     </del>	•	+		·	+	+		١.			+		+			ļ.,		H	• • •	Cruip				
AND   PROPERTY   AND   PROPERTY   AND   PROPERTY   PR			$\vdash$				ŀ		-	<u> </u>	•	ļ		1	·	ŀ		Н			٠	•	丰			-		$\Box$		pifera				
AND   PROPERTY   AND   PROPERTY   AND   PROPERTY   PR			READ			١.	Η.	1	٠,	∺				•	+		Η,	H	H	•			+		•	<u> </u>	<b>!</b>	╁	• • •	on tuli				
DATE APPROVED BY CITY COUNCIL OUT ON THE STORY HAVE STORY HAVE SEED TO STAND AND THE STORY HAVE STO			$\vdash$		Η.	H		١.	H		•	+	Н.	H	Į.	• •			•		+		Ι.	•		H.	H	Н						
DATE APPROVED BY CITY COUNCIL OUT ON THE STORY HAVE STORY HAVE SEED TO STAND AND THE STORY HAVE STO			EIGHT	-	•	i.	Ť.	•	j.	ŀ								١.			•		Ï				Ť			); Uirk				
DATE APPROVED BY CITY COUNCIL ONLY BY STAND AND LINES IN THE STAND A			H			<del>    .</del>	Н.	$\vdash$		₩	•	+		+	. .			ŀ	Н		+		+			$\vdash$		₩	<del>                                     </del>	d Ash				
DATE APPROVED BY CITY COUNCIL ONLY BY STAND AND LINES IN THE STAND A			I≝⊏	Columnar			Ħ			Ħ		t			Ħ	İ							ŧ					Ħ		аумоо				
DATE APPROVED BY CITY COUNCIL ONLY BY STAND AND LINES IN THE STAND A			SII.	-			H		Η.	Η.		+			+	١.	•	<del> </del>			+		+			H		H		pa (Ra				
DATE APPROVED BY CITY COUNCIL ONLY BY STAND AND LINES IN THE STAND A			$\vdash$			·	4	Η.	٠	·		ŀ	H	٠	$\blacksquare$	$\bot$	<u>.</u>	·	Н	•	4.		4		•	<u>· ·</u>		H		охусан				
DATE APPROVED BY CITY COUNCIL ONLY BY STAND AND LINES IN THE STAND A			T.API.	suoubiceCl		٠.	·			<b>.</b>		t			•						Ť		$\cdot   \cdot$			·		П		xinus				
CITY OF FREMONT STANDARD DETAILS  CITY STANDARD TREE PLANTING GUIDE LIST  REVISIONS  FILE NO.   SCALE   DRAWN   CHECKED   DATE   DWG NO.    CITY OF FREMONT 01/10/06 RESOLUTION NO. 2006-31  CITY STANDARD TREE PLANTING GUIDE LIST CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER			<u> </u>	นออมซีเอง(	•	$\vdash$	H	•		<del>    -   -   -   -   -   -   -   -   -  </del>	•	⊹	+	+	₩	+	•	+	·	•	+		+	+	•	H		∺		1				
CITY OF FREMONT STANDARD DETAILS  CITY STANDARD TREE PLANTING GUIDE LIST  REVISIONS  FILE NO.   SCALE   DRAWN   CHECKED   DATE   DWG NO.    CITY OF FREMONT 01/10/06 RESOLUTION NO. 2006-31  CITY STANDARD TREE PLANTING GUIDE LIST CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER		07 03								E				-5										Pear	car			П	st sp	ended				
CITY OF FREMONT STANDARD DETAILS  CITY STANDARD TREE PLANTING GUIDE LIST  REVISIONS  FILE NO. SCALE DRAWN CHECKED DATE DWG NO.		MITE					ich.			on The	d Gun	ark		TexA			aurel.	rhark	rec		olive ne		tmore	ring P	Ting P			П	ood ood e Page	comm				
CITY OF FREMONT STANDARD DETAILS  CITY STANDARD TREE PLANTING GUIDE LIST  REVISIONS  FILE NO. SCALE DRAWN CHECKED DATE DWG NO.		IOT L		ame	Acacia aple		hite Br		kberry	shingt	oquat iver Re	lronb	u d	: Fan	om oa	anda pe My	cian I	Aclalet Pan	indal	nleuca ry	ruitless and Pi	2	: Syce	: Flower r': Flor	Flowe Oak	ak				n not re				
CITY OF FREMONT STANDARD DETAILS  CITY STANDARD TREE PLANTING GUIDE LIST  REVISIONS  FILE NO. SCALE DRAWN CHECKED DATE DWG NO.		ARE N		non Z	Slack / Red M	Tree	can W	fwood	es Hac	m: Wg	onze L nsis: R	White	ert Gur	Grand	arailan hair Tr	: Jacar S: Cra	southe	cath N	via: Ca	s:Mek Aulber	ary IS	one Pir	dumbia	tocrat' inticle	Spire's	arlet O	y Oak	Sumac	Coast mese 1 ent: Is	ses an				
CITY OF FREMONT STANDARD DETAILS  CITY STANDARD TREE PLANTING GUIDE LIST  REVISIONS  FILE NO. SCALE DRAWN CHECKED DATE DWG NO.		CES /		:Com	ylon: I	r: Silk talian	Europ	a: Bee Deoda	hines	ampho	xa: Br alduler	oxylon	: Des	Rio .	a: Au faiden	sifolia	flora	olia: I	uener	elioide itless M	Swan 8: Car	ian Ste is: Pist	lia 'C	a 'Aris	a: Coa	ea: Sea	Valle	rican	virens m: Ch a 'Reg	ving tn				
CITY OF FREMONT STANDARD DETAILS  CITY STANDARD TREE PLANTING GUIDE LIST  REVISIONS  FILE NO. SCALE DRAWN CHECKED DATE DWG NO.		CHOI		Name	elanox um: So	ibrissir data: 1	ndula:	strict.	nsis: 0	num c.	a defle is cam	is leuc is melt	is rudis	velutin	orvillor loba: N	mim emia e	shilis 's	a cricil	a quinc	a stypł aa: Fru	paca '	a: Ital	acerifo	leryana leryana	leryana agrifoli	coccin	lobata	ea: V	mbigus epmer ebiferu aponie aurina	collov				
CITY OF FREMONT STANDARD DETAILS  CITY STANDARD TREE PLANTING GUIDE LIST  REVISIONS  FILE NO. SCALE DRAWN CHECKED DATE DWG NO.		ANT I		anical	acia m er ruba	izia ju tus cor	ula pe	suaring drus de	Itis sine	namor	poyte	alypu salypu	salypte	xinus	yera pa kgo bi	aranda	arus ne	lalence	lakeue	laleuc: rus all	a curc	us pinc	tanus	us cal	us cal	ercus	aecus	is lanc	binia a puoia s sium se sium si sium si	te: Tho				
CTTY OF FREMONT STANDARD DETAILS  CITY STANDARD TREE PLANTING GUIDE LIST  FILE NO. SCALE DRAWN CHECKED DATE  CITY STANDARD TREE PLANTING GUIDE LIST CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER  CITY ENGINEER		7 E		- P	Λc	2/2			3 3	100	취존	3 3	2 2	기의(	√ [		2	ΣΣ	Σ	2 2	ଠା≏	스		<u> </u> <u> </u> <u> </u>   <u> </u>	₹ Ö	ðĈ	1010	y⊠I	N S S S					
STANDARD DETAILS  CITY STANDARD  NO. REVISED DATE REVISIONS  FILE NO. SCALE DRAWN CHECKED DATE  STANDARD DETAILS  RESOLUTION NO. 2006-31  RESOLUTION NO. 2006-31  CITY ENGINEER  CITY ENGINEER  DRAWN CHECKED DATE DWG NO.								$\mathbb{C}^{\cdot}$	ľ	Γ7	7	(	)]	F	1	$\mathbf F$	R	?F	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	M		)	J	Τ			DA	TE A	APPROVED					
CITY STANDARD  NO. REVISED DATE  REVISIONS  FILE NO. SCALE  CITY STANDARD  TREE PLANTING GUIDE LIST  CITY ENGINEER  CITY ENGINEER  DRAWN CHECKED DATE  DWG NO.							•	<b>.</b>															•	•			RE	SOL	UTION NO.					
NO. REVISED DATE REVISIONS  FILE NO. SCALE  TREE PLANTING GUIDE LIST CITY ENGINEER  CITY ENGINEER  DRAWN CHECKED  DATE  DRAWN CHECKED  DATE  DWG NO.										•	וכ	$\overline{}$	I N L	JF	י ור	L	<u> </u>	<b>,</b> _	1 /	~II		,									00 0			1,712-0
NO. REVISED DATE REVISIONS  FILE NO. SCALE  TREE PLANTING GUIDE LIST CITY ENGINEER  CITY ENGINEER  DRAWN CHECKED  DATE  DRAWN CHECKED  DATE  DWG NO.											$\mathcal{C}$	:1-	T١	/	S.	T	4	ЛГ	) /	4 F	?┌	)							.,		21		,	
REVISIONS TILL F LAINTING GOTDL LIST CITY ENGINEER  FILE NO. SCALE DRAWN CHECKED DATE DWG NO.	NO.	REV	ISED	DAT	E			_	ים															<u>C</u>	_				Mas	~	the	9	les	. ,.
FILE NO. SCALE DRAWN CHECKED DATE DWG NO.	,							<u></u>	K	EE	:	<u>L</u>	. <u>A</u>	<u>IV</u>	ı	11	16	<del>,</del> (	J	Ul	ט		L	5	<u> </u>		- cn	ΥF						
	FILE NO.	1 \ C \ V  -	5,01							DF	AWN				$\neg$	СН	ECK	ED			$\neg$						-							
LSD-13.DWG NONE MM RER DEC. 2005 LSD-13 13 of 27	LSD-	-13.DWG		NO	NE	Ξ					ΜN	/I						RE	ΞR	₹		DE	C.	20	05	5			LSD-	-13			13 of	27

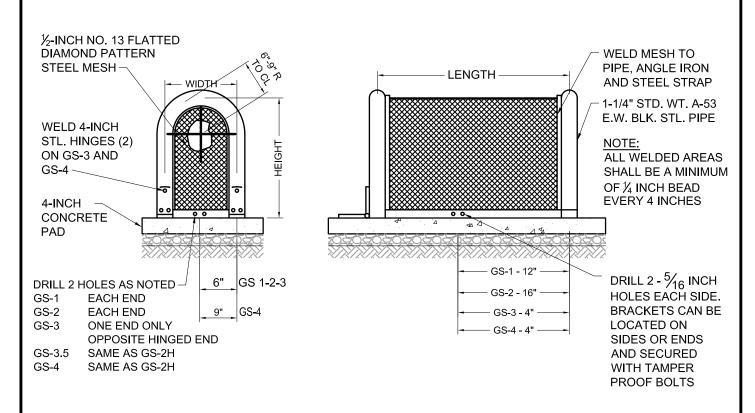
IRRIGATION CONTROLLER		(if applicable)	COMMENTS	STANDAF DETAIL
	Calsense	ET 2000	w/ all applicable software as required by the city, and dome antenna	LSD-15
Irrigation Controller Enclosure	Strong Box	SB-24CR	Houses controller only; Black	LSD-15
Reduced Pressure-Principle Backflow Preventor	Febco	825-Y		LSD-16
Backflow Assembly Cage	Guardshack	GS Series	Powdercoat Black	LSD-17
Irrigation Trench - Mainline	Sch. 40 PVC for 2" & less Class 315 PVC for 2-1/2"	& larger	24" below fin. grade	LSD-18
Irrigation Trench - Lateral line	Class 200 PVC for 1¼" and Sch. 40 PVC for line 1" & s	d greater smaller	18" below fin. grade	LSD-18
Sleeves	Class 315 PVC		24"/18" below fin. grade	LSD-18
Quick-Coupling Valve (in box)	Rainbird	44LRC - 1" key		LSD-19
Quick-Coupling Valve Box	Carson	910 Lockable	10" Round box w/ lid	LSD-19
Wire Splice	Scotchlok Y-spring connector		Install per detail LSD-20	LSD-20
Turf Sprinklers	Toro Hunter	Super 700C Series I-20 365-xx, 360°, adi	Large Turf Areas	LSD-2
Turf Sprinklers	Toro	640 Series	Large Turf Areas	LSD-2
Turf Sprinklers	Toro	570Z-6P Series	Small Turf Areas	LSD-2
Shrub/Groundcover	Toro	570Z-6P Series	Shrub/Groundcover Areas	LSD-2
Tree Bubblers	Toro	PC-FB-25	Trees	
Gate Valve (in box)	Nibco	T-113		LSD-2
Gate Valve Box	Carson	910 Lockable		LSD-22
Remote Control Valve (in box)	Griswold	2000 Series	2000 Series	LSD-23
Remote Control Valve Box	Carson	1324 Lockable		LSD-2
'Y' Strainer	Febco	650A 1/2"-2"		LSD-20
Pressure Reducing	Febco/Wilkins/Watts	XXX		LSD-2
Flow Sensor	Calsense	FM		LSD-24
Master Valve	Griswold	2000		LSD-2
E E C	Backflow Preventor Backflow Assembly Cage  Irrigation Trench - Mainline  Irrigation Trench - Lateral line  Sleeves  Quick-Coupling Valve (in box)  Quick-Coupling Valve Box  Wire Splice  Turf Sprinklers  Turf Sprinklers  Turf Sprinklers  Shrub/Groundcover  Tree Bubblers  Gate Valve (in box)  Gate Valve Box  Remote Control Valve Box  I'Y' Strainer  Pressure Reducing Valve Flow Sensor	Backflow Preventor Backflow Assembly Cage  Irrigation Trench - Mainline  Class 315 PVC for 2" & less Class 315 PVC for 2-1/2"  Irrigation Trench - Lateral line  Class 200 PVC for 1¼" and Sch. 40 PVC for line 1" & s Sleeves  Class 315 PVC  Quick-Coupling Valve (in box)  Quick-Coupling Valve Box  Wire Splice  Turf Sprinklers  Turf Sprinklers  Turf Sprinklers  Toro  Turf Sprinklers  Toro  Turf Sprinklers  Toro  Gate Valve (in box)  Remote Control Valve Box  Pressure Reducing Valve Flow Sensor  Calsense	Backflow Preventor Backflow Assembly Cage  Guardshack  GS Series  Guardshack  GS Series  Griss 315 PVC for 2" & less Class 315 PVC for 2-1/2" & larger  Guirdigation Trench - Lateral line  Class 200 PVC for 1½" and greater Sch. 40 PVC for line 1" & smaller  Class 315 PVC  Quick-Coupling Valve (in box)  Quick-Coupling Valve (in box)  Carson  Guick-Coupling Valve Box  Carson  Guick-Coupling Valve Box  Carson  Guick-Coupling Valve Box  Carson  Guick-Coupling Valve Box  Carson  Guick-Coupling Valve Box  Carson  Guick-Coupling Valve Box  Carson  Guick-Coupling Valve Box  Scotchlok Y-spring connector  Toro  Super 700C Series  Hunter  Guick-Coupling Valve Indicate Indi	Backflow Assembly Cage Guardshack GS Series Powdercoat Black  GS Series Powdercoat Black  GS Series Powdercoat Black  GS Series Powdercoat Black  GS Series  Class 200 PVC for 2-1/2" & larger  Irrigation Trench - Lateral line Class 200 PVC for 1½" and greater Sch. 40 PVC for line 1" & smaller  Class 315 PVC  Class As and greater  Clas





- 1. INSTALL BACKFLOW PREVENTOR AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.
- 2. INSTALL FREEZE PROTECTION JACKET AND CAGE. SEE CITY STANDARD DETAIL LSD-17 FOR CAGE DETAIL.
- 3. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

			CIT	Y OF			DATE APPROVED BY CITY COUNCIL 04/11/06	
				STANDAF	RD DETAILS	3	RESOLUTION NO. 2006-31	
			CITY	/ STANDA	RD IRRIC	SATION	11 11	,
NO.	REVISED	DATE	BACK	(FLOW PF	REVENTO	R UNIT	Nam Hay	hea
	REVISIONS	5	<u> </u>		<u> </u>		CITY ENGINEER	
FILE NO. LSD	-16.DWG	1" = 1	'-0"	DRAWN AK/MM/PM	CHECKED RER	NOV. 2005	DWG NO. LSD-16	16 of 27

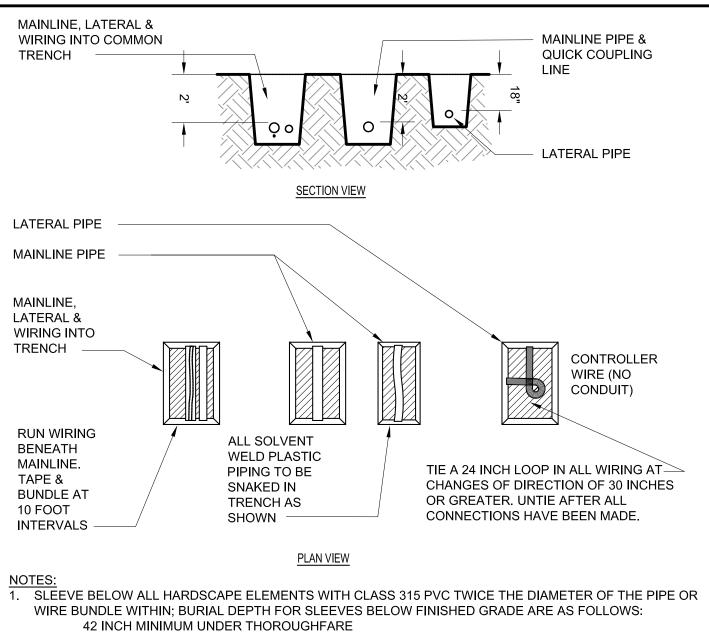


STD. SIZES	CENTERLINE DIMENSIONS		WEIGHT
GS5	12"W x 18"H x 12"L	LIFT OFF UNIT	35
GS-1	12"W x 24"H x 24"L	LIFT OFF UNIT	40
GS-2	12"W x 24"H x 32"L	LIFT OFF UNIT	45
GS-3	12"W x 24"H x 42"L	HINGED UNIT	51
GS-4	18"W x 30"H x 48"L	HINGED UNIT	67

GS = POWDER-COATED STEEL GUARDSHACK OR APPROVED EQUAL

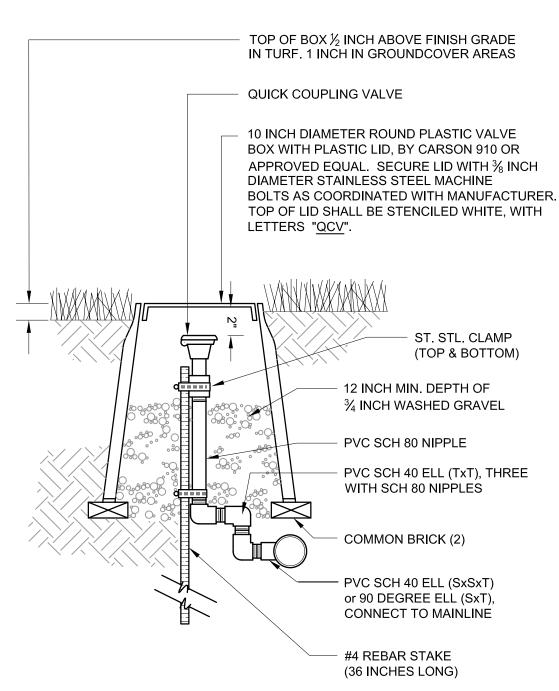
- 1. AFTER ALL WELDING, ENTIRE UNIT SHALL BE PROCESSED WITH IRON PHOSPHATE PRE-TREATMENT. ELECTROSTATIC APPLICATION OF POWDER SHALL BE FUSION BONDED. POWDERCOAT COLOR SHALL BE BLACK.
- ALL BOLTS FOR HINGES AND HASPS SHALL BE ZINC-PLATED TAMPER PROOF, EXCEPTION -USE SS HARDWARE FOR SS UNITS.
   SS = STAINLESS STEEL
- 3. REFER TO SPECIFICATIONS FOR MODEL NUMBER
- 4. REFER TO CITY STANDARD DETAIL LSD-14 FORALL MATERIALS

			CIT	Y OF	FREMO	ONT	DATE APPROVED BY CITY COUNCIL 04/11/06	
				STANDAF	RD DETAILS	3	RESOLUTION NO. 2006-31	
				CITY ST	ANDARD			
			D 1		DDEVEN	TOD	, 11	,
NO.	REVISED	DATE	$\frac{DP}{D}$	CKFLOW		<del></del>	Nam Huy	Les
	REVISIONS	<u>`</u>		<u>UNII EN</u>	<u>CLOSURI</u>	<b>_</b>	CITY ENGINEER	
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.	
LSD.	-17.DWG	1/2" =	= 1'-0"	AK/MM/PM	RER	NOV. 2005	LSD-17	17 of 27



- 24 INCH MINIMUM UNDER PLANTER AREA
- 24 INCH MINIMUM UNDER PARKING LOT
- 18 INCH MINIMUM UNDER SIDEWALK
- 36 INCH MINIMUM UNDER TRAFFIC CIRCLES (RESIDENTIAL AREAS)
- 2. ALL SLEEVE BELOW HARDSCAPE SHALL EXTEND 24 INCHES BEYOND HARD SURFACES EDGES.
- 3. FOR PIPE AND WIRE BURIAL DEPTHS, SEE SPECIFICATIONS.
- 4. SCH 40 PVC FOR MAINLINE 2 INCHES OR SMALLER.
- 5. CLASS 315 PVC FOR MAINLINE 2½ INCHES AND LARGER.
- 6. CLASS 200 PVC FOR 2 INCH LATERAL LINES AND SMALLER.
- 7. SCH 40 PVC FOR QUICK COUPLING LINE 1 INCH MIN. TO 2 INCH MAXIMUM
- 8. TRENCH BACKFILL SHALL BE NATIVE MATERIAL, COMPACT TO 90% MINIMUM, RELATIVE COMPACTION.
- 9. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

			CIT	Y OF			DATE APPROVED BY CITY COUNCIL 04/11/06	
				STANDAF	RD DETAILS	3	RESOLUTION NO. 2006-31	
				CITY S	TANDARD	)	11 21	,
NO.	REVISED	DATE	l	RRIGATIO	N TRENC	- CH	Man Hey	gles
	REVISIONS	5	<u> </u>	INNOATIC		<u> </u>	CITY ENGINEER	
FILE NO. SCALE 1/4" = 1			1'-0"	DRAWN AK/MM/PM	CHECKED RER	NOV. 2005	DWG NO. LSD-18	18 of 27



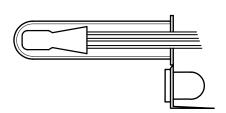
- 1. CONTRACTOR SHALL PROVIDE:
  - (2) VALVE KEYS
  - (2) SWIVEL HOSE-ELLS
- 2. ALL BOXES SHALL BE OFFSET 12 INCHES FROM ANY SIDEWALK, CURB OR HEADER.
- 3. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

			CIT	YOF	FREMORD DETAILS		DATE APPROVED BY CITY COUNCIL 04/11/06  RESOLUTION NO. 2006-31		
							2006-31		
			CITY	<u> / STANDA</u>	RD IRRIC	<u>SATION</u>	11 11	1	
NO.	REVISED	DATE	QUICK	(COUPLI	NG VALVI	E IN BOX	Nam Huy	hea	
	REVISIONS	5					CITY ENGINEER		
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.		
LSD	-19.DWG	3" = 1	'-0"	AK/MM/PM	RER	NOV. 2005	LSD-19	19 of 27	

STEP 1: STRIP WIRES  $\frac{1}{2}$  INCH FROM ENDS.



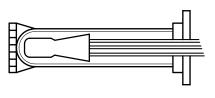
STEP 3: INSERT SPLICE FILLED TO BOTTOM OF GEL-FILLED TUBE, CHECK TO MAKE SURE CONNECTOR HAS BEEN PUSHED PAST LOCKING FINGERS AND IS SEATED AT BOTTOM OF TUBE.



STEP 2: APPLY SCOTCHLOK Y SPRING CONNECTOR IN A CLOCKWISE DIRECTION.

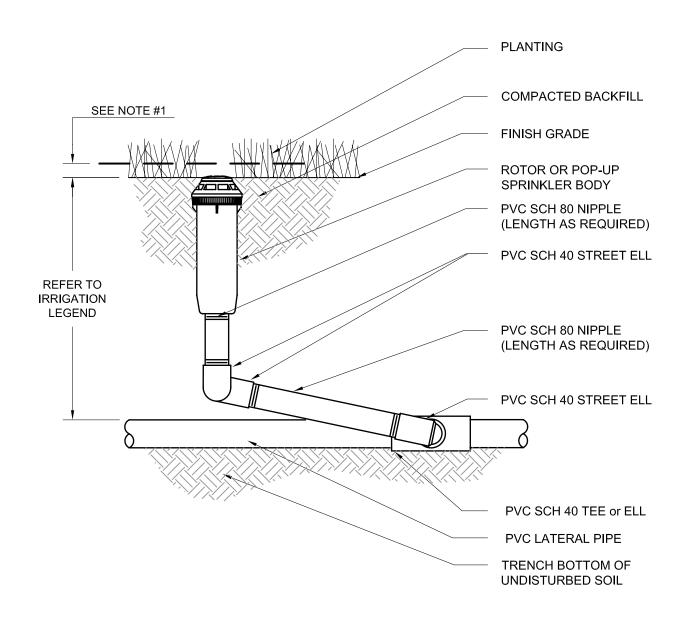


STEP 4: POSITION WIRES IN WIRE CHANNELS AND CLOSE INSULATOR TUBE COVER.



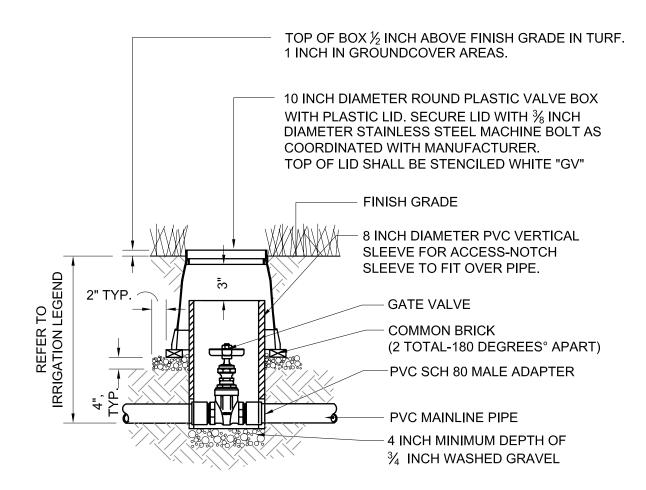
- 1. MAXIMUM WIRE SIZES PER CONNECTOR ARE 3-#14'S OR 2-#12'S
- 2. REFER TO CITY STANDARD DETAIL LSD-14 FOR MATERIALS

			CIT	Y OF	FREMO	ONT	DATE APPROVED BY CITY COUNCIL 04/11/06	
				STANDAF	RD DETAILS	3	RESOLUTION NO. 2006-31	
				CITY S	TANDARE	)	1 21	
NO.	REVISED	DATE	IRF	RIGATION	WIRE SE	PLICE	Man Huy	Les
	REVISIONS	S	11 (1	(10/(1101)	VVII (L OI	LIOL	CITY ENGINEER	
FILE NO. LSD	-20.DWG	scale NONE	Ξ	DRAWN AK/MM/PM	CHECKED RER	NOV. 2005	DWG NO. LSD-20	20 of 27



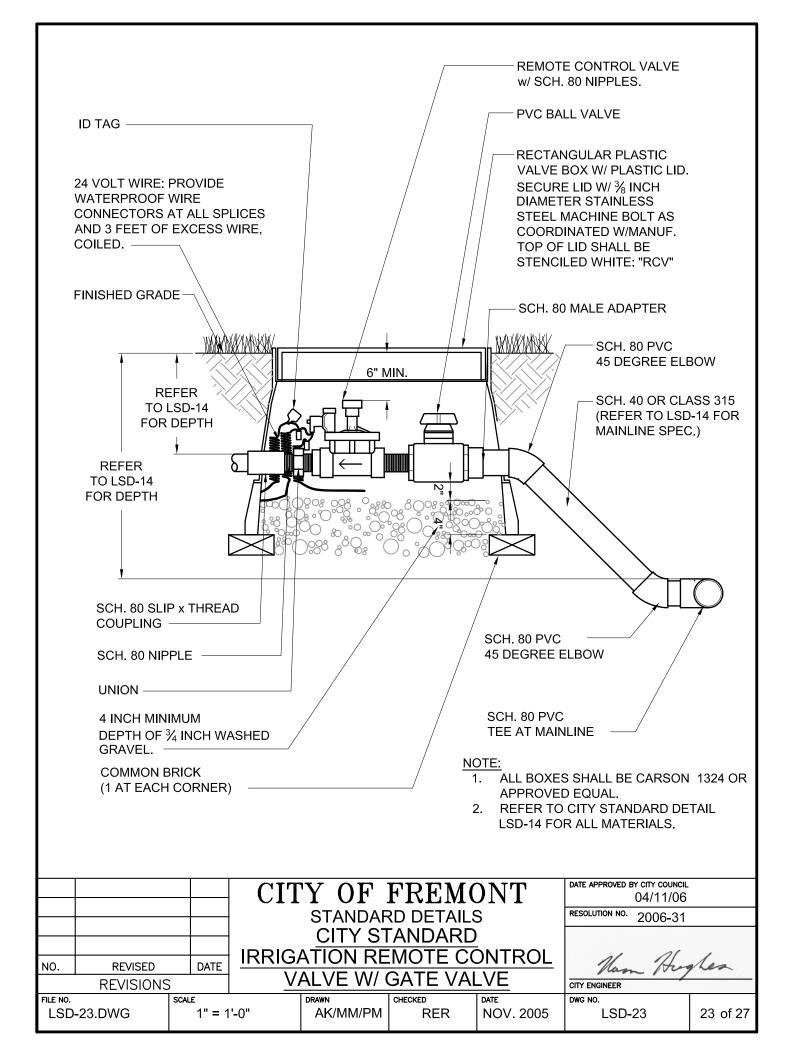
- 1. INSTALL TOP OF POP-UP SPRINKLER 1 INCH ABOVE FINISHED GRADE IN SHRUB AREAS AND FLUSH WITH GRADE IN TURF AREAS.
- 2. ROTORS SHALL BE INSTALLED FLUSH IN TURF AREAS.
- 3. REFER TO CITY STANDARD DETAIL LSD-14 FOR MATERIALS

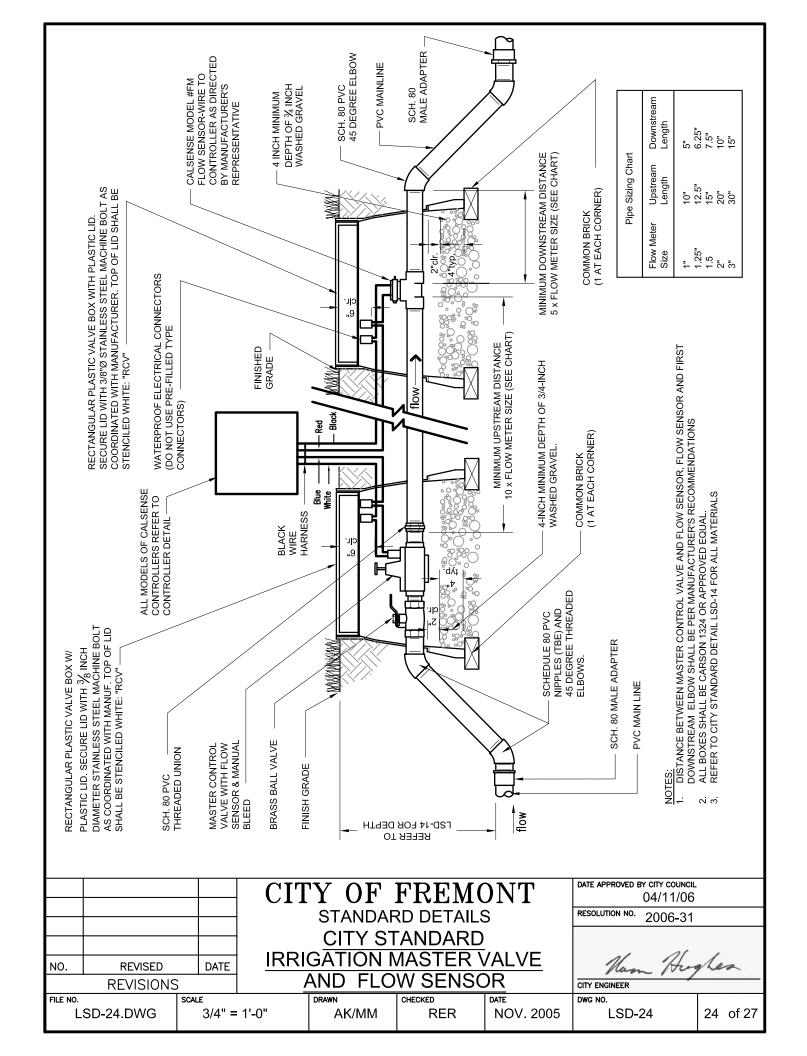
			CIT	Y OF	FREMO	ONT	DATE APPROVED BY CITY COUNCIL 04/11/06	
			STANDARD DETAILS				RESOLUTION NO. 2006-31	
				CITY S	1 21	,		
NO.	REVISED	DATE	IRRIG	IRRIGATION ROTOR OR POP-UP				Nes
	REVISIONS	3				<del> </del>	CITY ENGINEER	
FILE NO. LS			ONE	DRAWN AK/MM/PM	CHECKED RER	NOV. 2005	DWG NO. LSD-21	21 of 27

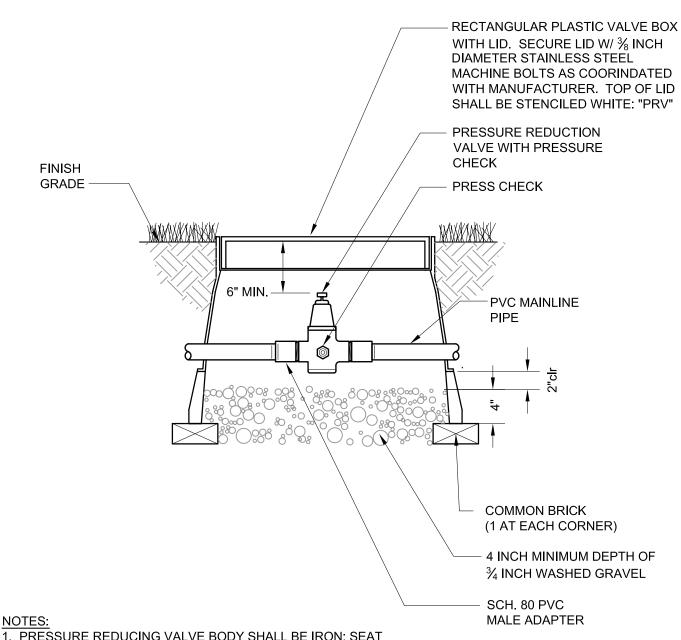


1. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

			CIT	CITY OF FREMONT [						-
			STANDARD DETAILS			RESOLUTION NO. 2006-31				
NO.	REVISED REVISIONS	DATE	IRF	CITY STANDARD IRRIGATION GATE VALVE				Nam Hughen		
FILE NO. SCALE LSD-22.DWG 1-1/2"		= 1'-0"	DRAWN AK/MM/PM	CHECKED RER	NOV. 2005	DWG NO. LSD-22	22 of 27			

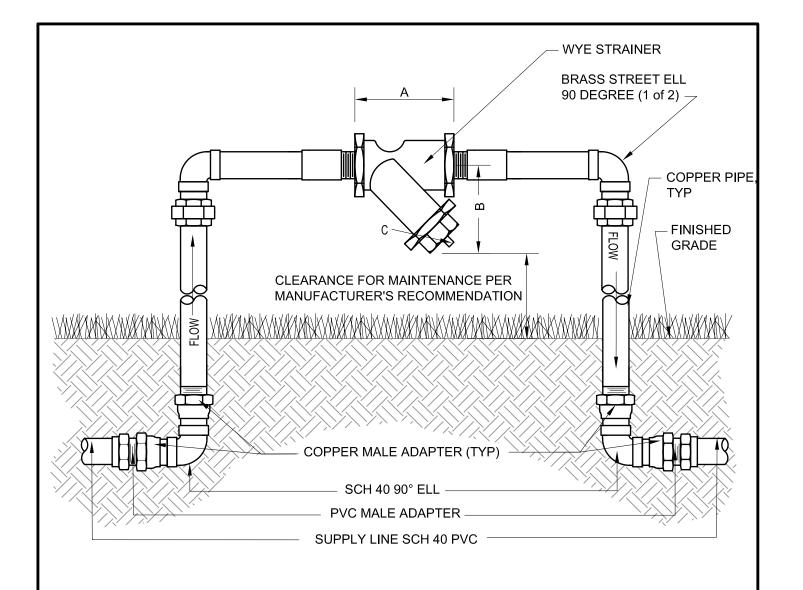






- 1. PRESSURE REDUCING VALVE BODY SHALL BE IRON; SEAT SHALL BE STAINLESS STEEL; INTEGRAL STRAINER SHALL BE STAINLESS STEEL; STEM SHALL BE BRASS; AND, DISK SHALL BE BRASS.
- 2. ALL BOXES SHALL BE CARSON 1324 OR APPROVED EQUAL.
- 3. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

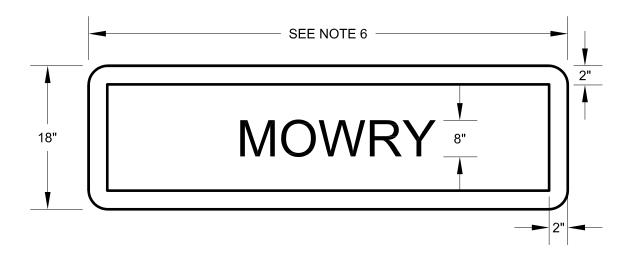
			CIT	Y OF	FREMO	ONT	DATE APPROVED BY CITY COUNCIL 04/11/06	
			STANDARD DETAILS			RESOLUTION NO. 2006-31		
			CITY STANDARD					
	DE #055	D. T.	IR	<b>RIGATION</b>	N PRESSI	JRE	11 11	1.
NO.	REVISED	DATE		REDUCTION VALVE			Nam Huy	res
	REVISIONS	)				<u> </u>	CITY ENGINEER	
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.	
LS	LSD-25.DWG		1'-0"	AK/MM/PM	RER	NOV. 2005	LSD-25	25 of 27



Size	<i>Y</i> <sub>2</sub> "	%"	1"	1//4"	11/2"	2"
Α	2¾"	3"	3¾"	4½ <sub>16</sub> "	4 <sup>15</sup> / <sub>16</sub> "	61/8"
В	21/4"	2%16"	23/4"	3%"	37/8"	51/8"
С	1/4"	3/8"	3/8"	3/4"	3/4"	1"
Wt	.75	1.38	2.13	3.13	4.5	7

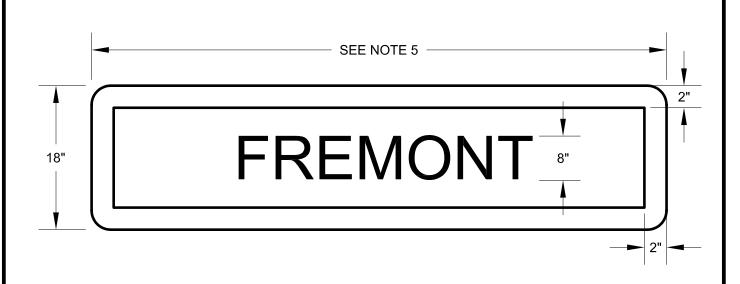
- 1. BODY AND CAP SHALL BE BRONZE ASTM B62; SCREEN SHALL BE 20 MESH STAINLESS STEEL; GASKET SHALL BE NON-ASBESTOS; ENDS SHALL BE THREADED ANSI/ASME B1.20.1
- 2. WORKING PRESSURE SHALL BE NON-SHOCK, 200 PSI @ 150 DEGREES
- 3. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

			CIT	Y OF	FREMO	ONT	DATE APPROVED BY CITY COUNCIL 04/11/06		
			STANDARD DETAILS [			RESOLUTION NO. 2006-31			
NO.	REVISED REVISIONS	DATE	<u>IRRI</u>	CITY STANDARD IRRIGATION WYE STRAINER				Nam Hughen	
FILE NO.	INEVISIONS	SCALE		DRAWN	CHECKED	DATE	DWG NO.		
			: 1'-0"	AK/MM/PM	RER	NOV. 2005	LSD-26	26 of 27	



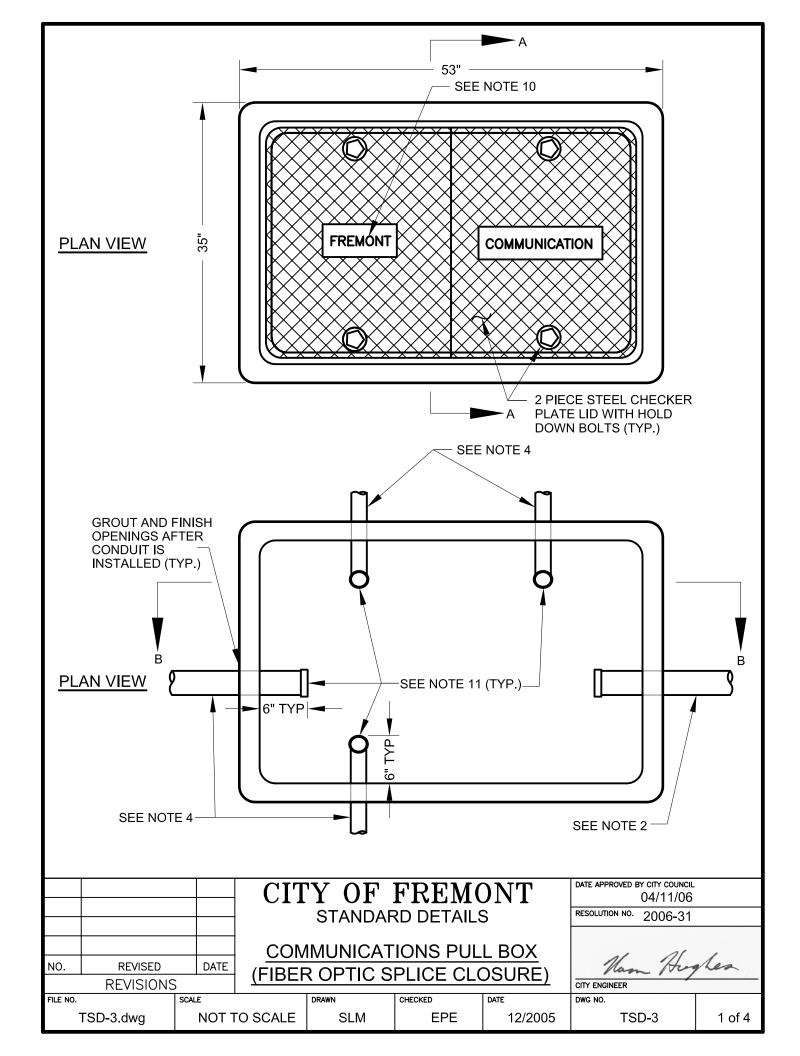
- 1. SIGN SHALL BE DOUBLE FACED USING 8 INCH, SERIES D, ALL CAPS LETTERS.
- 2. SIGN SHALL BE A D3-1 PLATE WITH 2 INCH WHITE RETROREFLECTIVE BORDER AND WHITE RETROREFLECTIVE LETTERING ON GREEN, RETROREFLECTIVE BACKGROUND (TYPE IX RETROREFLECTIVE SHEETING) CONSTRUCTED USING 0.08 INCH GAUGE METAL PLATE.
- 3. MAST ARM MOUNTED STREET NAME SIGNS SHALL BE INSTALLED WITH OVERHEAD MAST ARM ADJUSTABLE SWING SIGN BRACKETS (HAWKINS MIOJ-OCB25CAL).
- 4. FOR SIGNS 7' AND WIDER, THE SIGN SHALL BE INSTALLED WITH A  $1\frac{1}{4}$  INCH BY  $1\frac{1}{4}$  INCH ALUMINUM ANGLED CHANNEL ALONG THE FULL WIDTH OF THE SIGN. THE CHANNEL SHALL BE INSTALLED ON THE BACKSIDE OF THE SIGN ALONG THE TOP.
- 5. REFER TO CALTRANS STANDARD PLAN FOR MOUNTING DETAILS AND PLACEMENT. THE SIGN BRACKET SHALL BE DOUBLE STRAPPED TO THE MAST ARM WITH HEAVY DUTY STAINLESS STEEL STRAPS.
- 6. ACTUAL SIGN WIDTH SHALL BE SIZED ACCORDING TO THE SPECIFIC STREET NAME. THE MINIMUM SIGN WIDTH SHALL BE 4 FEET.

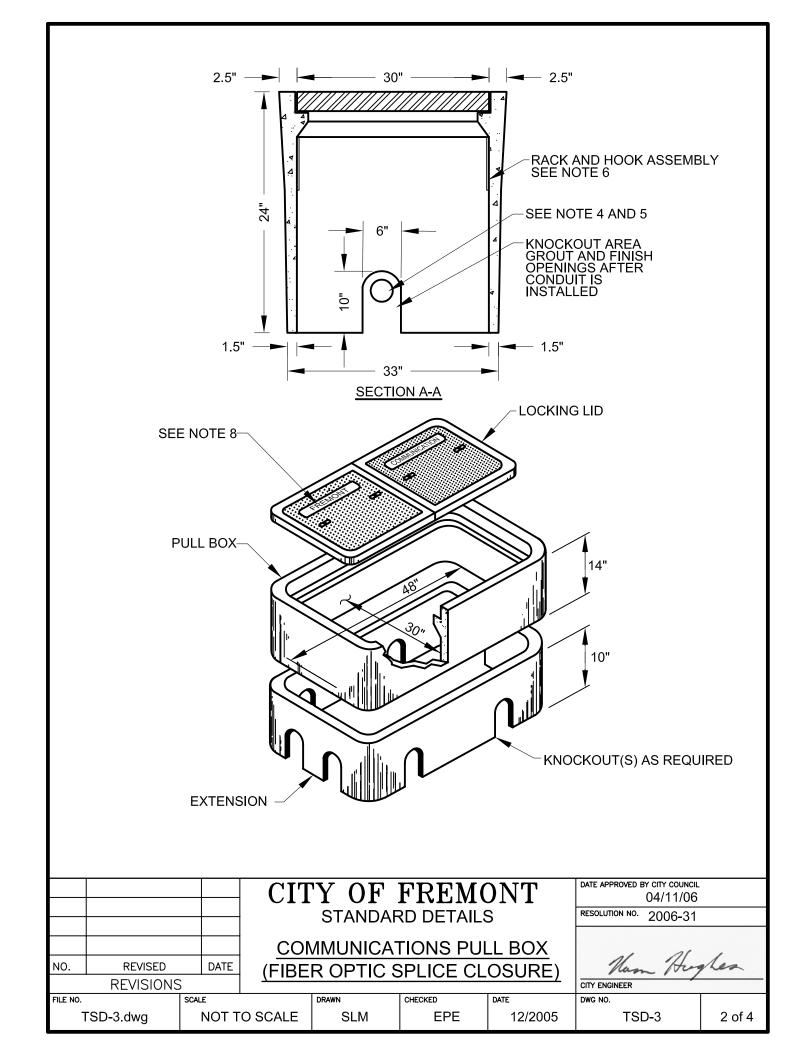
			CIT	Y OF	DATE APPROVED BY CITY COUNCIL 04/11/06				
			STANDARD DETAILS				RESOLUTION NO. 2006-31		
				STREET	21				
NO.	REVISED	DATE		MAST ARM MOUNTED				Les	
	REVISIONS	3					CITY ENGINEER		
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.		
TSD-1.dwg NOT To		O SCALE	SLM	EPE	12/2005	TSD-1	1 of 1		

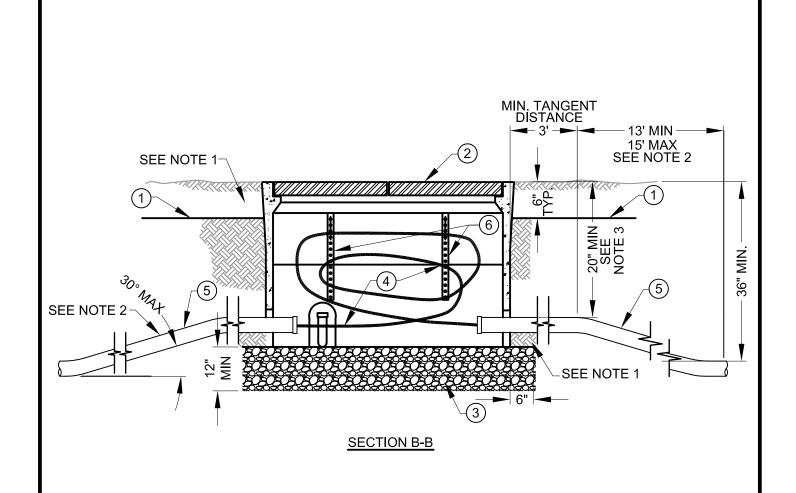


- SIGN SHALL BE SINGLE FACED USING 8 INCH, SERIES D, ALL CAPS LETTERS.
- 2. SIGN SHALL BE A D3-1 PLATE WITH 2 INCH WHITE RETROREFLECTIVE BORDER AND WHITE RETROREFLECTIVE LETTERING ON GREEN, RETROREFLECTIVE BACKGROUND (TYPE IX RETROREFLECTIVE SHEETING) CONSTRUCTED USING 0.08 INCH GAUGE METAL PLATE.
- 3. SIGN SHALL BE INSTALLED WITH TWO (2)  $1\frac{1}{4}$  INCH BY  $1\frac{1}{4}$  INCH BY  $\frac{1}{8}$  INCH ALUMINUM ALLOY CHANNEL 6063-T5 ALONG THE FULL LENGTH OF THE SIGN. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
- 4. FABRICATE FOR ELECTROLIER/SIGNAL POLE MOUNTING. INSTALL WITH BACK BRACE AND SPECIAL BRACKET PER CALTRANS STANDARD PLAN.
- 5. ACTUAL SIGN WIDTH SHALL BE SIZED ACCORDING TO THE SPECIFIC STREET NAME. THE MINIMUM SIGN WIDTH SHALL BE 4 FEET.

			CIT	Y OF	FREMO	ONT	DATE APPROVED BY CITY COUNCIL 04/11/06	
			STANDARD DETAILS				RESOLUTION NO. 2006-31	
NO.	REVISED	DATE		STREET POLE N	Nam Hay	Nes		
	REVISIONS	)					CITY ENGINEER	
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.	
_	TSD-2.dwg NOT TO		O SCALE	SLM	EPE	12/2005	TSD-2	1 of 1







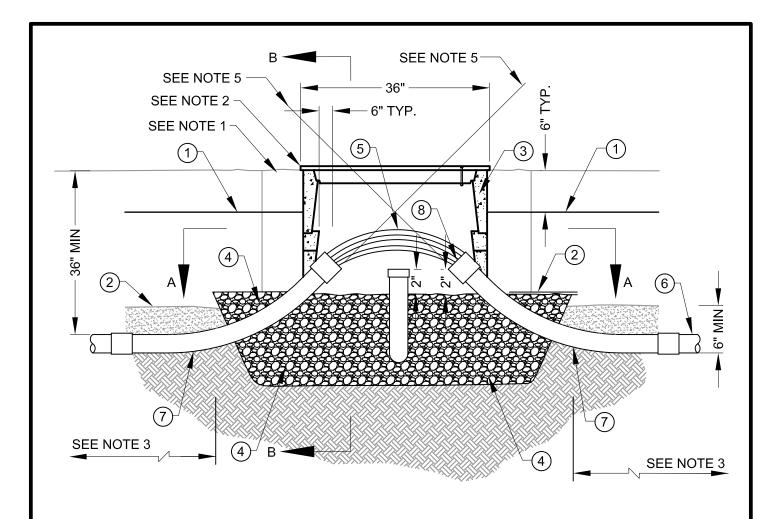
ITEM	DESCRIPTION
$\bigcirc$	WARNING TAPE (IF OPEN TRENCH)
2	F/O PULL BOX WITH LID & EXTENSION
3	BEDDING MATERIAL
4	COMMUNICATION CABLE
(5)	CONDUIT (SEE PLANS FOR SIZE AND QUANTITY)
6	RACK & HOOK ASSEMBLY (SEE NOTE 6)

	1						DATE ADDROVED BY OTH COUNCIL	
			CIT	Y OF	FREM(	ONT	DATE APPROVED BY CITY COUNCIL 04/11/06	
				STANDARD DETAILS			RESOLUTION NO. 2006-31	
			COI	MMUNICA <sup>.</sup>	. 21			
NO.	REVISED	DATE	(FIBE	R OPTIC S	Nam Huy	Les		
	REVISIONS	5					CITY ENGINEER	
FILE NO.		SCALE	•	DRAWN	CHECKED	DATE	DWG NO.	
Т	TSD-3.dwg NOT		O SCALE	SLM	EPE	12/2005	TSD-3	3 of 4

# COMMUNICATIONS PULL BOX (FIBER OPTIC SPLICE CLOSURE) NOTES:

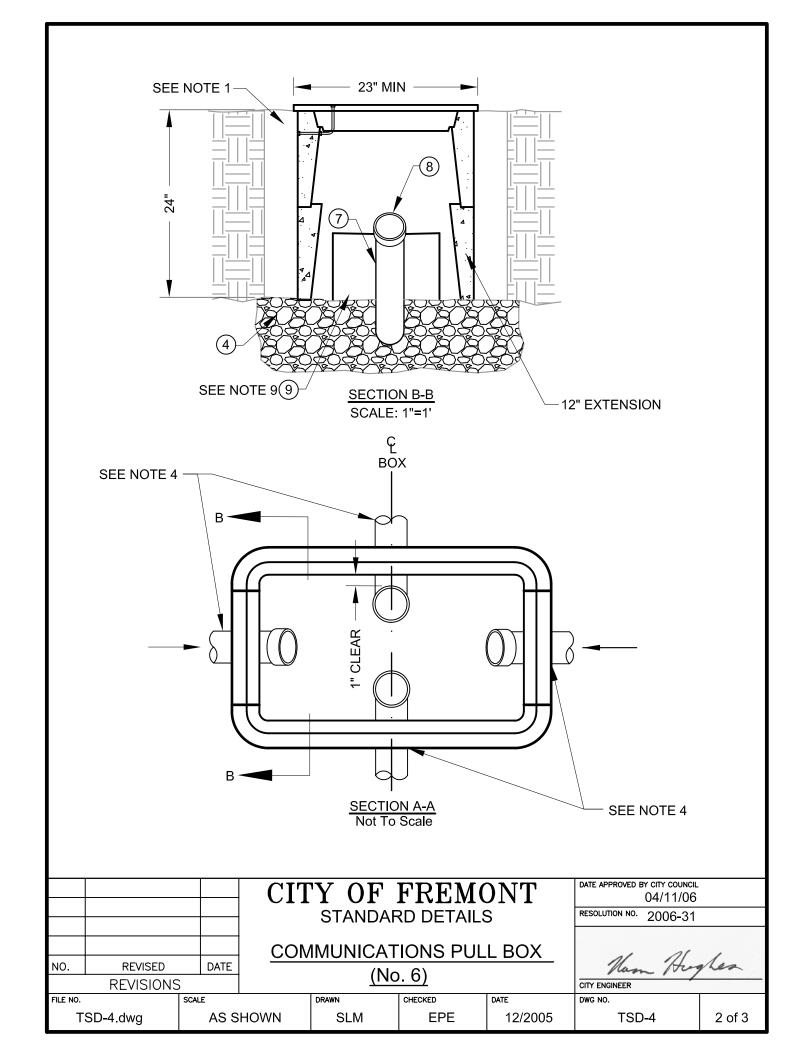
- BACKFILL ACCORDING TO CALTRANS STANDARD PLANS AND SPECS.
- 2. CONDUIT(S) FROM THE TYPICAL TRENCH SECTION SHOULD NOT DEFLECT BY MORE THAN 1 FOOT PER 10 FEET FROM THE ALIGNMENT PRECEDING OR FOLLOWING PULL BOX ENTRANCE/EXIT.
- 3. TOP OF CONDUITS ENTERING THROUGH SIDE OF PULL BOX SHALL BE LOCATED AT LEAST 20 INCHES BELOW EXISTING FINISHED GROUND.
- 4. SEE PROJECT PLAN SHEETS FOR NUMBER AND SIZE OF CONDUIT.
- 5. IF MORE THAN 3 CONDUITS ARE REQUIRED, KNOCKOUT SHALL BE WIDENED \( \frac{1}{4} \) INCH MORE THAN THE ADDITIONAL CONDUIT WIDTH.
- 6. ALL PULL BOXES SHALL BE FURNISHED WITH TWO RACKS & HOOKS INSTALLED ON EACH OF THE TWO LONG SIDES.
- 7. CONDUITS SHALL ENTER THROUGH KNOCKOUTS.
- 8. PULL BOX AND STEEL COVER SHALL SUPPORT AASHTO H20-44 TRUCK LOADING.
- 9. LOCKING MECHANISM SHALL BE PROVIDED FOR COVER. FOUR  $\frac{3}{4}$  INCH PENTA HEAD BOLTS AT 90° SHALL BE USED. ONE  $\frac{3}{4}$  INCH PENTA HEAD SOCKET AND RATCHET SHALL BE PROVIDED WITH EVERY 10 PULL BOXES.
- 10. "FREMONT COMMUNICATION" SHALL BE THE TITLE INTEGRATED IN THE LID.
- 11. ALL CONDUITS SHALL HAVE BELL ENDS.
- 12. INSTALL CONDUIT PLUGS ON EACH CONDUIT ENTERING THE PULL BOX, IF NOT USED.
- 13. FURNISH AND INSTALL CAPS OR DUCT PLUGS FOR ALL UNUSED CONDUIT.
- 14. PULL BOX HEIGHT ABOVE FINISHED GRADE SHALL PERMIT 2 INCH OF SURFACE LANDSCAPING, IF APPLICABLE, TO MATCH EXISTING CONDITIONS.
- 15. WHEN A NEW PULL BOX IS INSTALLED TO REPLACE A SMALLER EXISTING PULL BOX, MODIFY EXISTING CONDUITS TO CONFORM WITH INSTALLATION DETAILS SHOWN ON THIS SHEET UNLESS OTHERWISE APPROVED BY THE ENGINEER.

			CIT	Y OF FREMONT  Date approved by city council 04/11/06				
				STANDAF	RESOLUTION NO. 2006-31			
			CON	MMUNICA <sup>-</sup>	21 21			
NO.	REVISED	DATE	(FIBE	R OPTIC S	SPLICE CL	OSURE)	Man He	ghes
	REVISIONS	S					CITY ENGINEER	
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.	
TSD-3.dwg NOT T			O SCALE	SLM	EPE	12/2005	TSD-3	4 of 4



ITEM	DESCRIPTION
1	WARNING TAPE (IF OPEN TRENCH)
2	30 LB FELT PAPER
3	NO. 6 PULL BOX WITH EXTENSION WITH EXCEPTIONS AS DRAWN
4	BEDDING MATERIAL
5	COMMUNICATION CABLE
6	CONDUIT (SEE PLANS FOR SIZE AND QUANTITY)
7	45 DEGREE PVC ELBOW, 36" RADIUS
8	CONDUIT BELL END (TYPICAL)
9	KNOCK OUT 8" X 12"

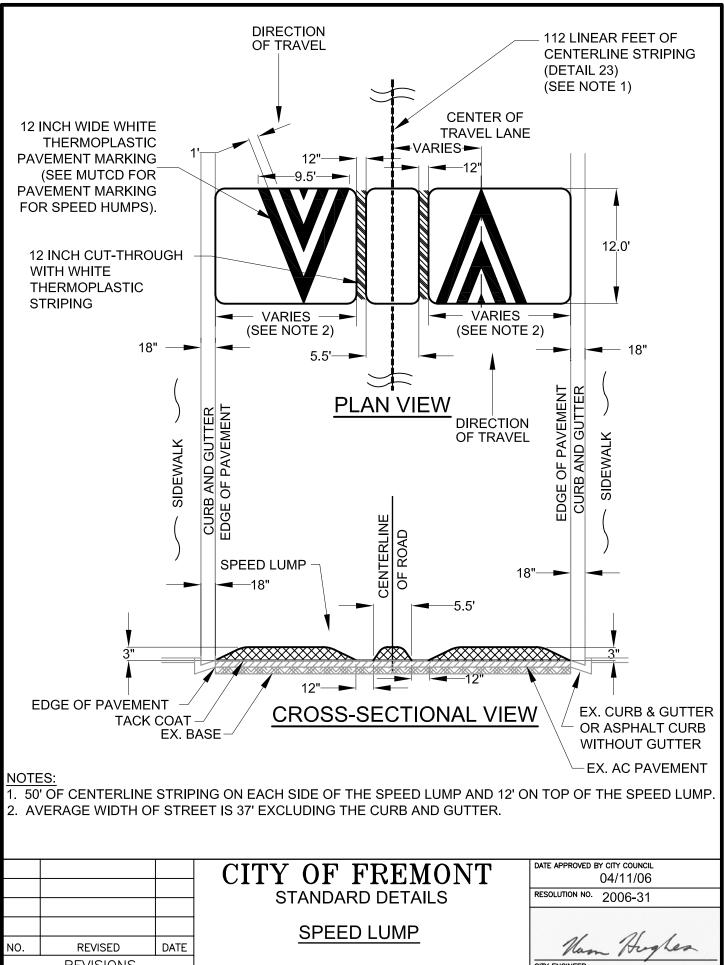
			CIT	CITY OF FREMONT				
			STANDARD DETAILS				RESOLUTION NO. 2006-31	
NO.	REVISED	DATE	COM	MUNICAT	Nam Huy	Nes		
	REVISIONS	5		(INC	<u> 6)</u>		CITY ENGINEER	
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.	
L	TSD-4.dwg NOT TO		O SCALE	SLM	EPE	12/2005	TSD-4	1 of 3



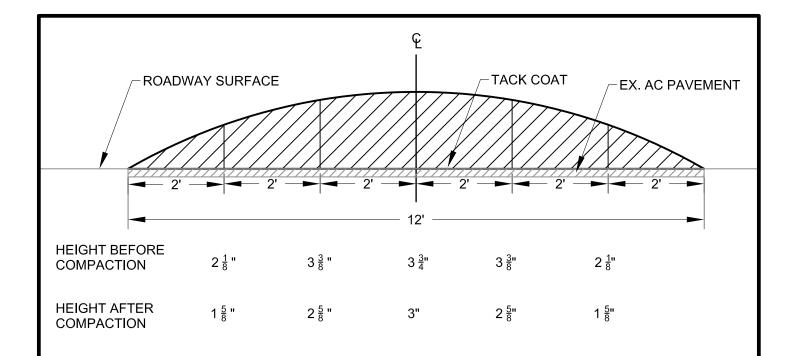
# COMMUNICATIONS PULL BOX (No. 6) DETAIL NOTES:

- BACKFILL ACCORDING TO CALTRANS STANDARD PLANS AND SPECS.
- 2. IF BOX IS PLACED IN TRAFFIC, DRIVEWAY AREAS OR PLANTER STRIP, THE BOX SHALL BE RATED FOR H20 LOADING AND STEEL COVER SHALL BE USED.
- CONDUIT FROM THE TYPICAL TRENCH SECTION SHOULD NOT DEFLECT BY MORE THAN 1 FOOT PER 10 FEET FROM THE ALIGNMENT PRECEDING OR FOLLOWING THE PULL BOX.
- 4. SEE PLAN SHEETS FOR NUMBER AND SIZE OF CONDUIT. IF MORE THAN 3 CONDUITS ARE REQUIRED, KNOCKOUT SHALL BE WIDENED  $\frac{1}{2}$  INCH MORE THAN THE ADDITIONAL CONDUIT WIDTH.
- 5. BOTTOM OF CONDUIT CENTERLINE SHALL BE ALIGNED TO EXIT TOP OF PULL BOX TO FACILITATE CABLE PULLING.
- 6. "FREMONT COMMUNICATION" SHALL BE THE TITLE INTEGRATED IN THE LID.
- 7. USE FELT PAPER TO BLOCK OPENING BETWEEN CONDUITS.
- 8. PULL BOX HEIGHT ABOVE FINISHED GRADE SHALL PERMIT 2 INCH OF SURFACE LANDSCAPING, IF APPLICABLE, TO MATCH EXISTING CONDITIONS.
- 9. WHEN A NEW PULL BOX IS INSTALLED TO REPLACE A SMALLER EXISTING PULL BOX, THE CONTRACTOR SHALL MODIFY EXISTING CONDUITS TO CONFORM WITH INSTALLATION DETAILS SHOWN ON THIS SHEET UNLESS OTHERWISE APPROVED BY THE ENGINEER.

			CIT	'Y OF	DATE APPROVED BY CITY COUNCIL 04/11/06			
			STANDARD DETAILS				RESOLUTION NO. 2006-31	
	DE #055	DATE	CON	MUNICAT	11 11 1.			
NO.	REVISIONS	DATE	<u>(No. 6)</u>				CITY ENGINEER	
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.	
TSD-4.dwg		NOT TO SCALE		SLM	EPE	12/2005	TSD-4	3 of 3



**REVISIONS** CITY ENGINEER FILE NO. DRAWN CHECKED DATE DWG NO. **EPE** TSD-5.dwg NOT TO SCALE SLM 12/2005 TSD-5 1 of 2



# **TYPICAL PROFILE**





SIGN ADJACENT TO SPEED LUMP W17-1 ADVANCED WARNING SIGN W17-1 AND W16-9P

- 1. SEE THE CITY OF FREMONT STANDARD DETAILS FOR THE INSTALLATION OF SIGN POSTS.
- 2. SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND MUTCD CALIFORNIA SUPPLEMENT FOR SIGN DETAILS.

			CITY OF FREMONT STANDARD DETAILS				DATE APPROVED BY CITY COUNCIL 04/11/06	
							RESOLUTION NO. 2006-31	
NO.	REVISED	DATE		SPEED	Nam Hughen			
110.	REVISIONS						CITY ENGINEER	
FILE NO.		SCALE		DRAWN	CHECKED	DATE	DWG NO.	
Т	SD-5.dwg	NOT TO SCALE		SLM	EPE	12/2005	TSD-5	2 of 2

